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extile bulletin

APRIL • 1954

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BULLETIN is published by Clark Publishing West Morehead St., 2, N.C. Subscription year in advance, $3 years. Entered as class mail matter 1911, at Postoffice, N. C., under Act ress, March 2, 1897.

Announcing

the appointment of **OLIVER D. LANDIS** as exclusive agent in the Carolinas and Virginia for all products of

GEORGIA WEBBING & TAPE CO.

Manufacturers of

SPINNING, TWISTER and LEADER TAPE

Also made in single herringbone, double herringbone and basket weave.

Made in All Widths

Including our popular

"SUPER SPIN-MASTER" TAPE

which is *guaranteed* to give complete satisfaction. There is no cotton tape which gives longer life, more uniform or higher spindle speed, resulting in more uniform twist, lower power cost and a better quality of yarn...... and

We can prove it to you!

With a Strobotac, an accurate instrument for measuring R. P. M., we can prove that "Super Spin-Master" pulls better. On request, we will be glad to conduct a Strobotac test in your mill. *A ten-minute demonstration will prove our claim.*

Georgia Webbing & Tape Company
Columbus Georgia

Exclusive Agent in the Carolinas and Virginia

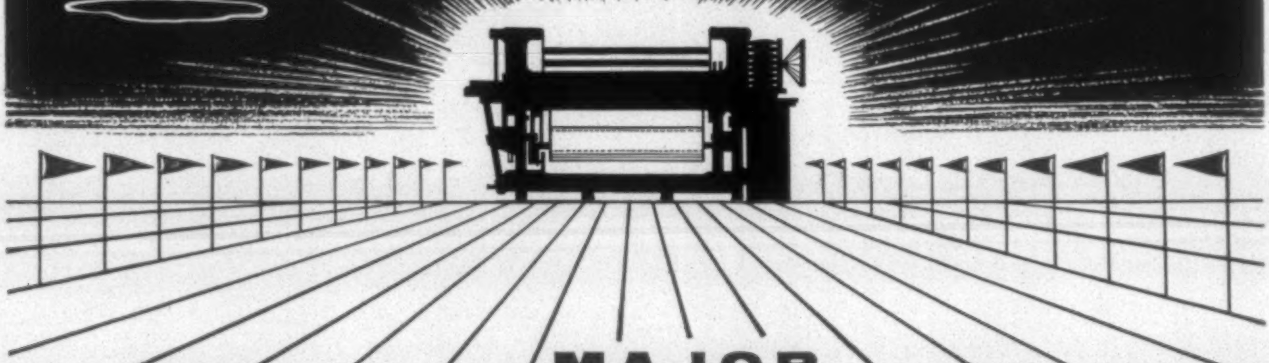
OLIVER D. LANDIS, Inc.
718 Queens Road Charlotte 7, N. C.

FRED E. ANTLEY, P. O. Box 802, Greenville, S. C., South Carolina Representative

DRAPER

LOOMS . . . *with*

ENCLOSED GEARING
SIMPLIFIED THREAD CUTTER
OIL BATH LUBRICATION
ARCHLESS CONSTRUCTION
ANTI-FRICTION BEARINGS
IMPROVED LET-OFFS
NEW DRIVES
NEW TAKE-UPS



MAJOR IMPROVEMENTS

Which ensure Lower Weaving Costs

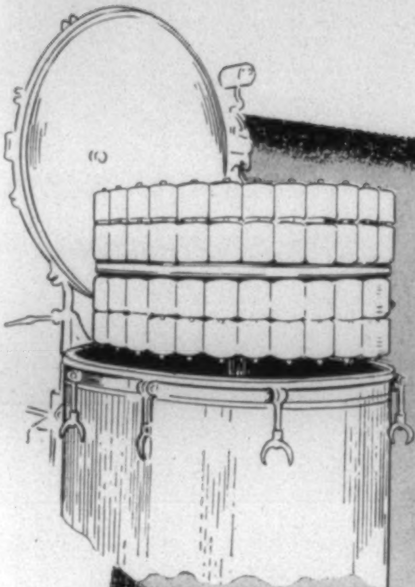
Models XL, E, XD, XP, 3 X2's

TEXTILE MACHINERY EXHIBITION
AMERICAN ASSOCIATION
ATLANTIC CITY APRIL 26-30 1954

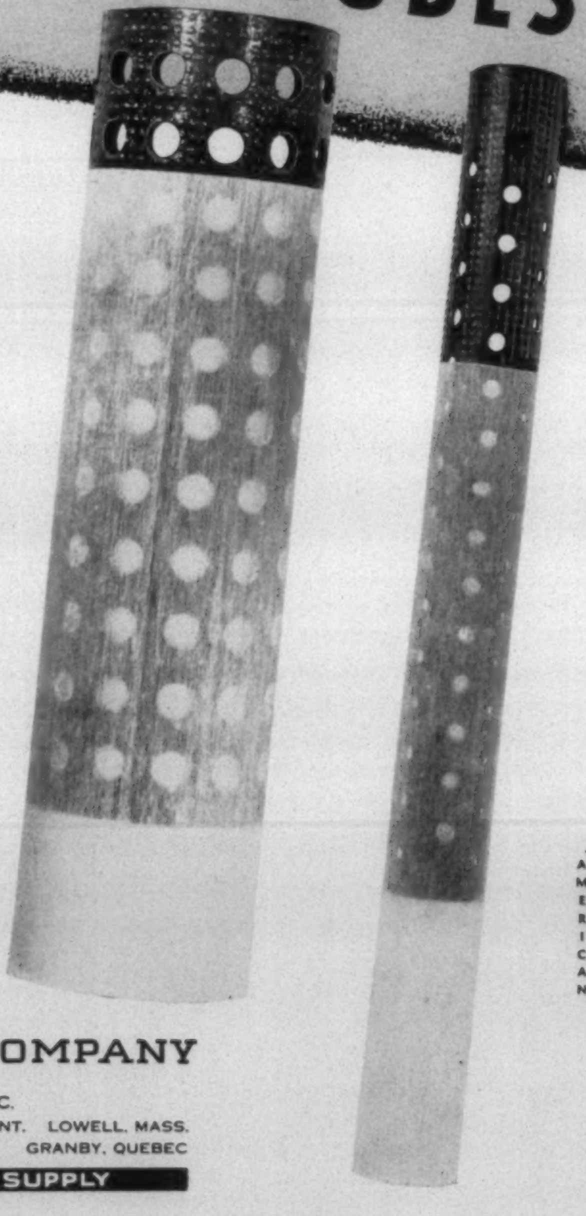
Don't miss the Draper Exhibit in space No. 222

DRAPER CORPORATION

ATLANTA, GA.
HOPEDALE, MASS.
GREENSBORO, N. C.
SPARTANBURG, S. C.



dye CLEANER and BETTER by using SONOCO DYTEX® TUBES



WITH PLASTAVON SLEEVE

The Sonoco Dytex Tube, with Plastavon Sleeve, is a proven one-time-use yarn carrier for all standard forms of package dyeing. The sleeve breaks up jet action to allow more uniform distribution throughout the entire package of yarn and reduces slippage in primary winding. Standard sizes ⅝" I.D. x 6¾" long and 1⅝" I.D. in varying lengths. Also special sizes.

sonoco
SERVES THE WORLD
PAPER CARRIERS
REG. U.S. PAT. OFF.

TEXTILE MACHINERY
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71-72

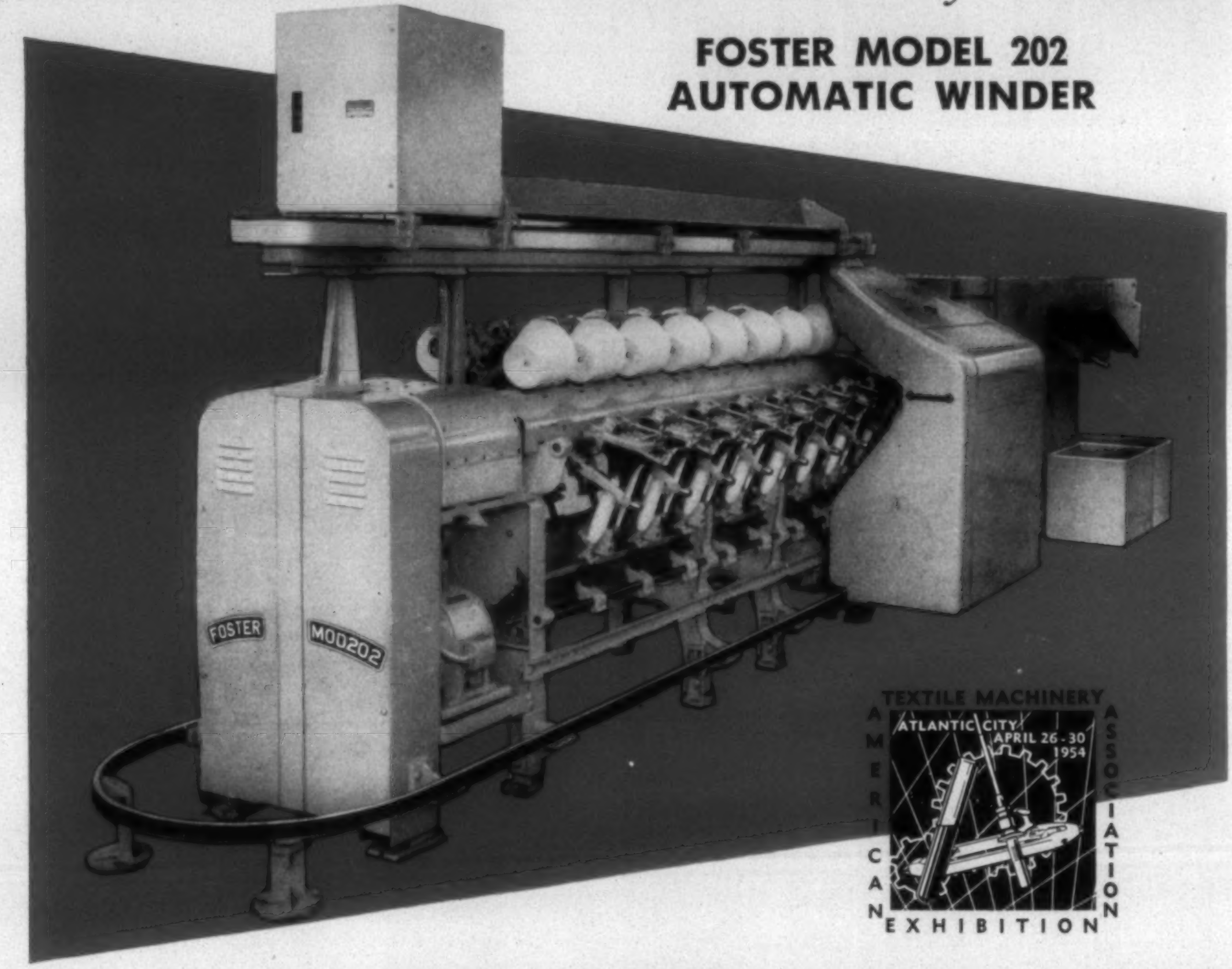
SONOCO PRODUCTS COMPANY

MAIN OFFICE—HARTSVILLE, S. C.
MYSTIC, CONN. LOS ANGELES, CAL. BRANTFORD, ONT. LOWELL, MASS.
PHILADELPHIA, PA. AKRON, IND. GARWOOD, N.J. GRANBY, QUEBEC

DEPENDABLE SOURCE OF SUPPLY

See It at the American Textile Machinery Exhibition

FOSTER MODEL 202 AUTOMATIC WINDER



The Only Automatic Machine which Winds Satisfactory Knitting Cones

This brand new machine, 10 years in the designing, making and testing, marks a new step forward in automatic cone winding. It produces cones which are satisfactory for knitting — identical in quality to cones produced on the Foster Model 102, whose product, for years, has been the standard of quality for the knitting trade.

PRODUCTION It also increases production per operator between 100% and 300% over non-automatic winders, depending on kind and count of yarn. Up to 120 spindles per machine.

AUTOMATIC FEATURES The machine automatically locates and ties ends down (in a weaver's knot), automatically doffs empty bobbins and automatically sorts partially filled and empty bobbins, conveying them to two separate bins.

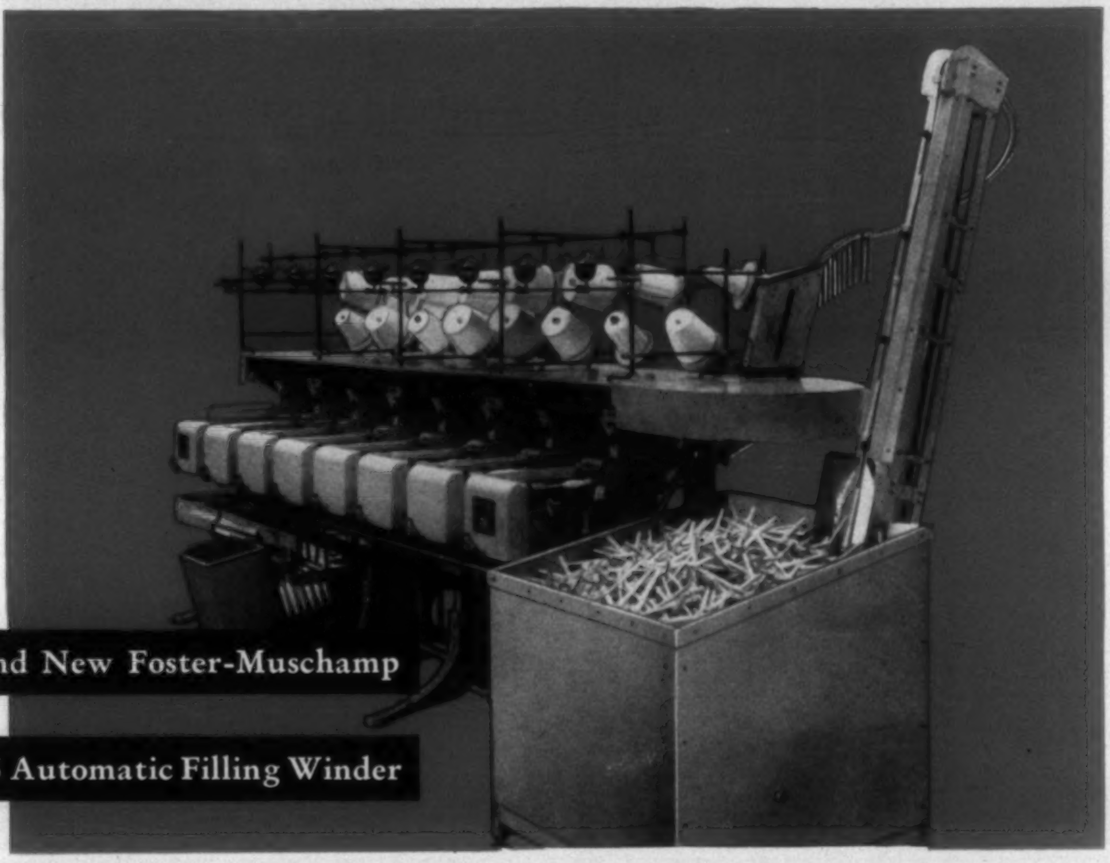
OPERATOR The only duties of the operator are to put full bobbins in chutes, put the loose end in a clip, don and doff cones and thread up new cones.

You can see this machine in operation at Booth No. 563, American Textile Machinery Exhibition, Atlantic City, N. J., April 26-30. Come and visit us.

FOSTER MACHINE COMPANY
Westfield, Mass., U. S. A.

Southern Office, Johnston Bldg., Charlotte, N. C. • *Canadian Representative,* Ross Whitehead & Co., Ltd., 1475 Mountain St., Montreal, Que., and 35-37 King St., W., Toronto • *European Representative,* Muschamp Textile Machinery Ltd., Keb Lane Bardsley, Ashton-under-Lyne, England.

SEE IT AT THE AMERICAN TEXTILE MACHINERY EXHIBITION



The Brand New Foster-Muschamp

Model 66 Automatic Filling Winder

INCREASES PRODUCTION PER OPERATOR BY 300% OVER COMPETING AUTOMATIC EQUIPMENT

This machine gives the highest production and the lowest winding cost yet achieved. One operator, with this machine, can handle 5000 net pounds of yarn per 8 hour shift at a cost of about 19 mils per pound of yarn quilled.

It operates at a spindle speed of 15,000 r.p.m. *while preserving the original quality of the yarn and producing practically perfect bobbins.* All the operator has to do is to keep the magazine creel loaded and thread up. Everything else is done automatically, including conveying empty bobbins to the spindles, starting and stopping the spindles, doffing of full bobbins and conveying them to pinboards. The standard machine is 32 spindles.

The machine is also highly flexible and therefore suitable for many different types of mills. Different counts or colors can be run on different spindles of the same machine at the same time and the machine will wind equally well all types of yarn and many different sizes — from coarse counts to the finest — filament or spun.

Don't fail to see this machine in operation at Booth 563, American Textile Machinery Exhibition, Atlantic City, N. J., April 26-30.

TEXTILE MACHINERY
ATLANTIC CITY
APRIL 26 - 30
1954
AMERICAN
ASSOCIATION
EXHIBITION

FOSTER MACHINE COMPANY
Westfield, Massachusetts, U.S.A.
Southern Office—Johnston Bldg., Charlotte, N. C.

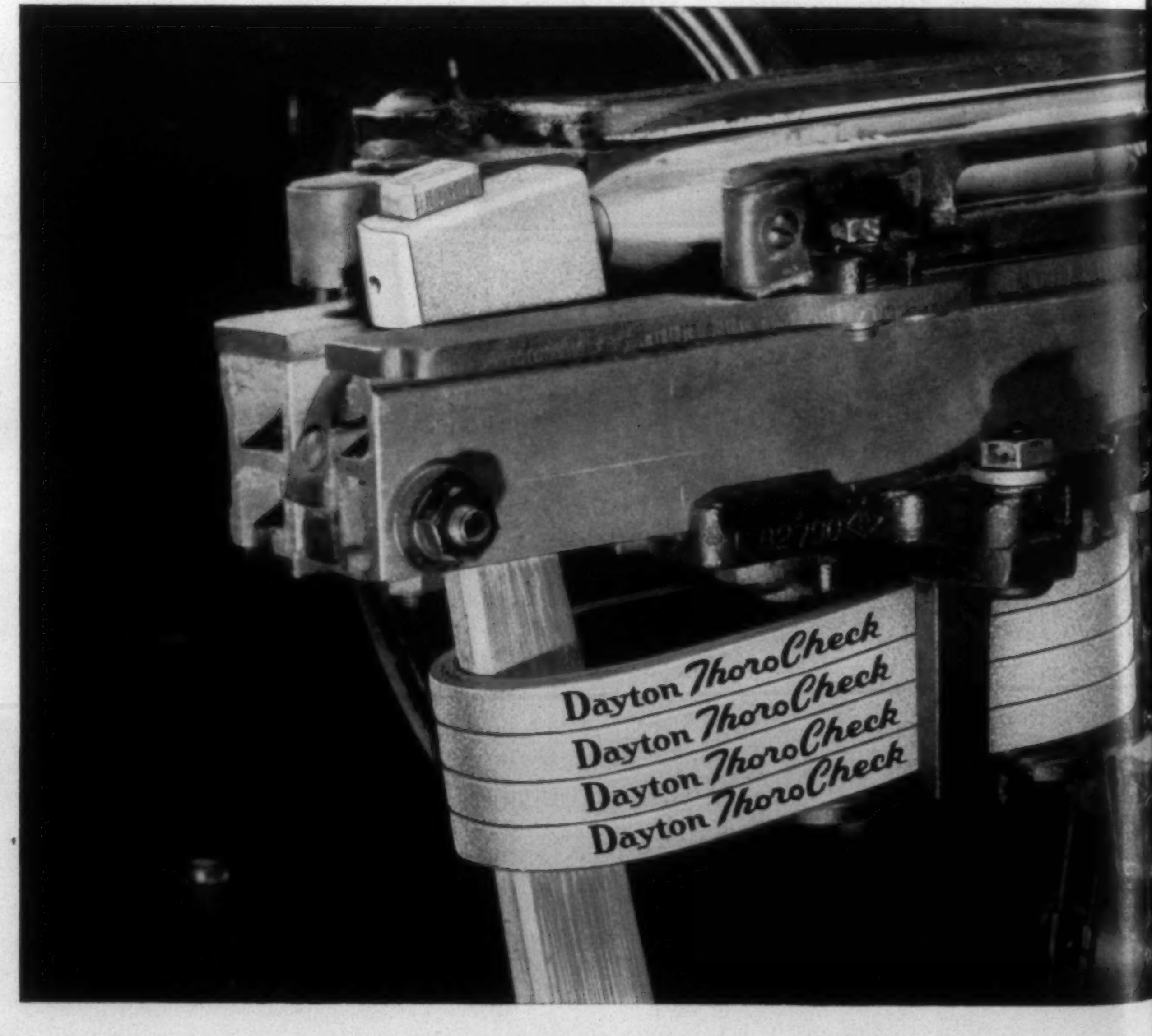
Mills Save 25%

DAYTON ThoroCheck

Actual use proves economy of Dayton ThoroChecks. Reduce picking motion costs by equipping your frames with Dayton ThoroChecks that have proved themselves in actual operation. Mill superintendents report a 25% to 50% reduction in check strap cost as well as healthy savings in time, labor and maintenance with these amazing, longer-lasting synthetic ThoroChecks.

One mill reports installing Dayton ThoroChecks on 40 looms running 182 picks per minute. No adjustment has been necessary and inspection after 14 months of continuous service shows no signs of wear. No telling *how much* the saving will eventually be when new Dayton ThoroChecks are finally installed.

You can get these worthwhile benefits for *your* weaving



to 50% with...

Endless Check Straps

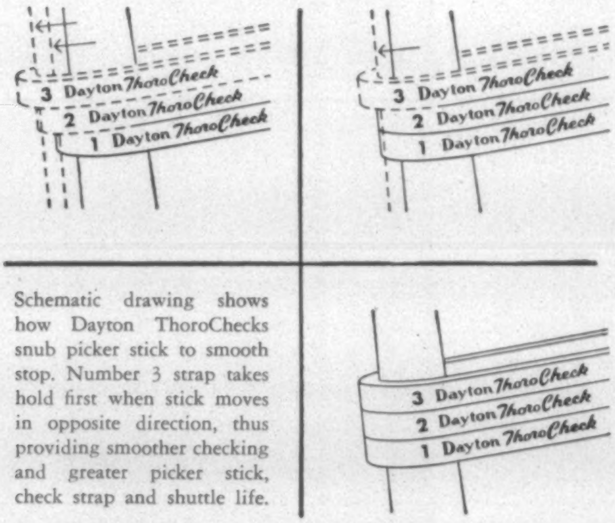
room operation, just as other mills are doing, by changing to Dayton ThoroCheck Endless Check Straps throughout.

There's an important safety factor, too, in Dayton ThoroChecks. For, when breakage finally does take place after lengthy service, usually only one check strap of the set will be affected . . . the remaining two will protect your equipment until the needed replacement has been accomplished.

Smoother checking by means of a snubbing action protects the stick and, in addition, because impact of the picker stick is displaced over *all three* straps, you get longer strap life under the severest pounding. No doubt about it, you'll improve your checking operation and reduce your cost with Dayton ThoroChecks. Try a test today. Just fill out and mail the coupon for complete details without delay.

Only ThoroChecks have all these advantages:

- ✓ Outlast other check straps 25% to 50%
- ✓ Provide individual or multiple replacement
- ✓ Give greater picker and shuttle life
- ✓ Check more smoothly—protect picker stick
- ✓ Rubberized fabric construction—no elongation
- ✓ Not affected by temperature or humidity
- ✓ Little or no adjustment needed



Schematic drawing shows how Dayton ThoroChecks snub picker stick to smooth stop. Number 3 strap takes hold first when stick moves in opposite direction, thus providing smoother checking and greater picker stick, check strap and shuttle life.

Dayton Rubber

Since 1905

Textile Products for Better Spinning & Weaving © D.R. 1954

Dayton Rubber Co., Textile Division **Woodside Bldg., Greenville, S. C.**

Dayton Rubber Co., Textile Division, Dept. 304, Woodside Bldg., Greenville, S. C.
Send me complete information on Dayton ThoroCheck Endless Check Straps

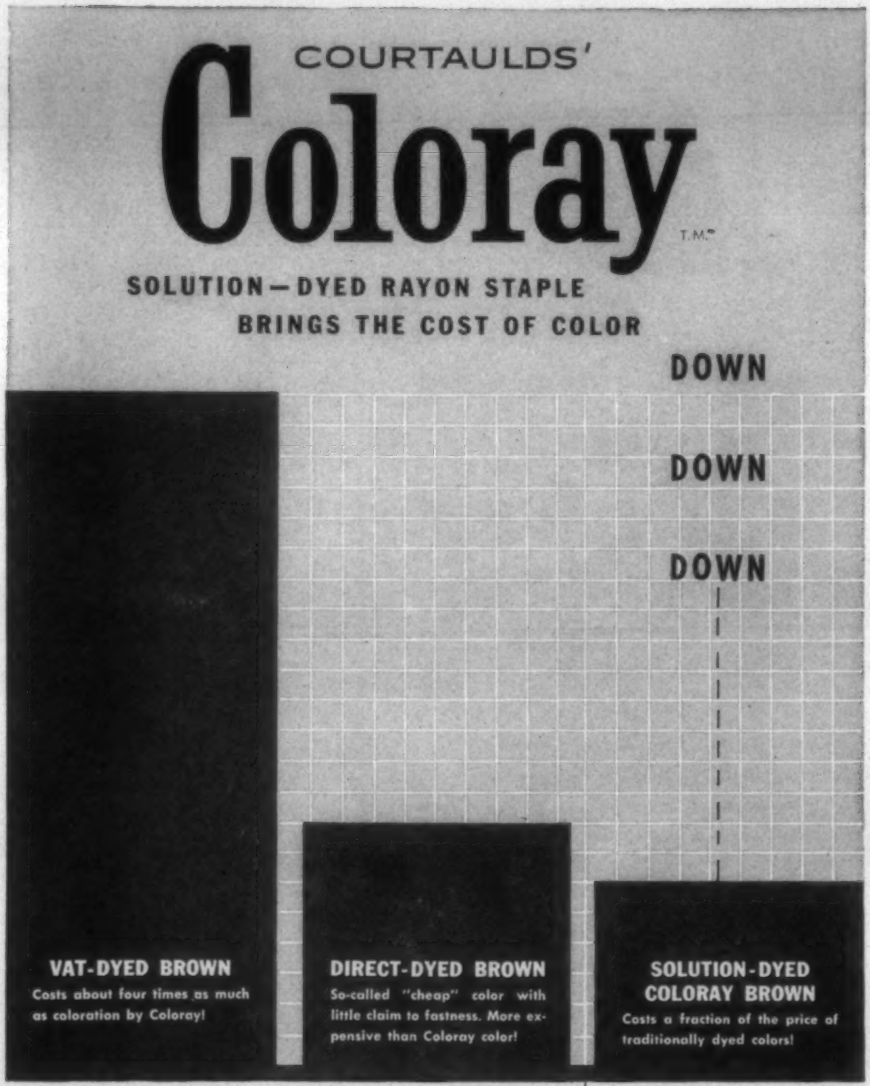
*Name*____________________

*Name of Mill*____________________

*Address*____________________

*City*__________ *Zone*_____ *State*__________

Highest Colorfastness at Lowest Color Cost!



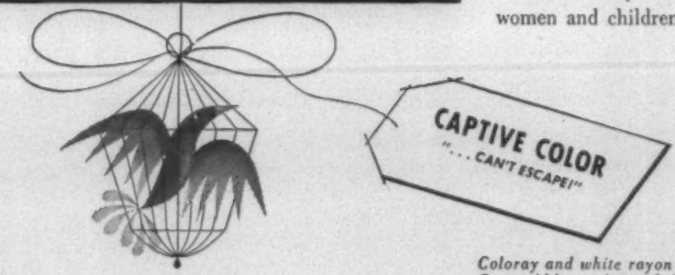
Here's why Coloray is so good for volume business. It's a *bargain*. Coloray colors offer real savings over traditionally-dyed colors. And in the popular dark shades, where dyeing costs zoom, Coloray savings are spectacular!

Look at the price advantage with Coloray Brown. You do as well with Coloray Black. Almost as well with navy, dark green and red. And so on down the Coloray range. Coloray also greatly reduces the cost of color in blends—whether the other fiber is dyed or not, whether the other fiber is synthetic or natural. Yes, Coloray makes possible all kinds of color wonders . . . on a shoestring. For instance! A beautiful grey can be developed by blending ⅓ Coloray Black with ⅔ white cotton. Color cost: as little as ⅓ of a cent per yard!

Coloray cuts processing costs *too*. Here's a color fiber ready to spin into a color yarn. No winding or re-winding of yarn before and after dyeing. And here's really *uniform* color—side to side, end to end. No streaky, shaded ends to discard—at a loss. You profit all the way with Coloray, the original solution-dyed fiber by Courtaulds, the company that developed the viscose process.

What a price story! And it means this. With Coloray, supremely colorfast, color-rich merchandise is now within the reach of the great mass market. What an opportunity to *volume*-sell on a really grand scale. Piece goods. Draperies. Upholstery. Slip covers. Auto seat covers. Convertible tops. Wearables for men, women and children. *You* name it.

Visit Courtaulds' exhibit
American Textile Machinery Show
Atlantic City — April 26-30
Booths 860-863



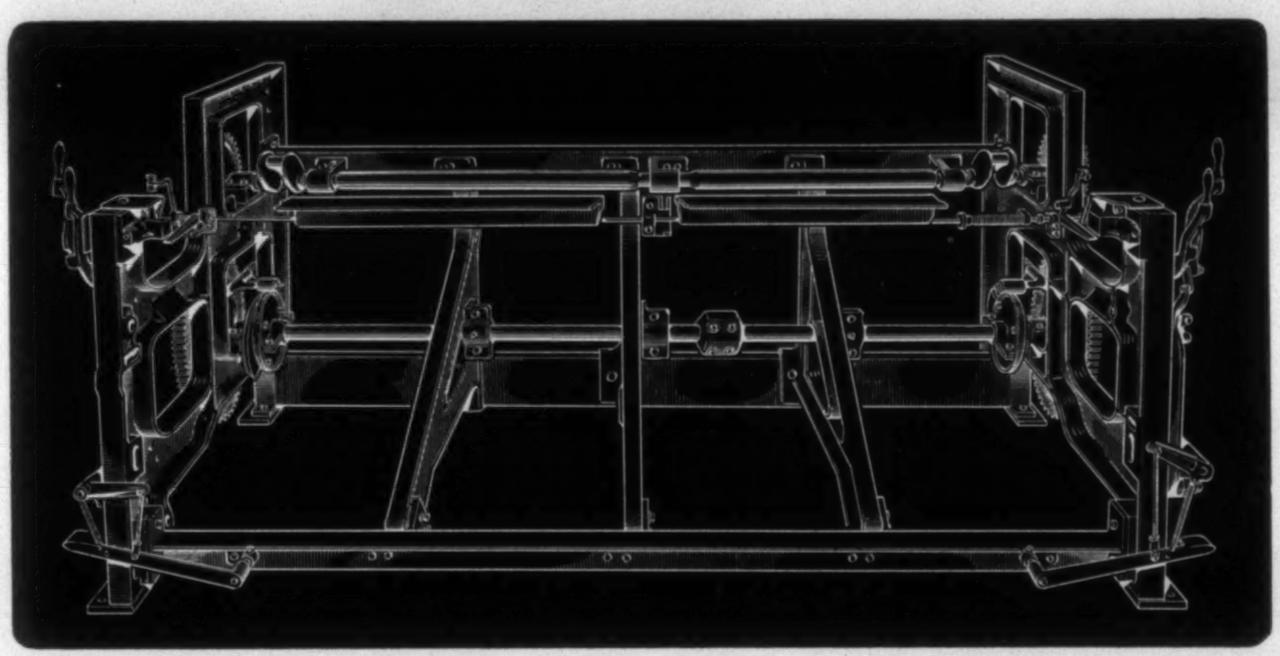
For further information, write Fabric Development Dept.

Coloray and white rayon staple are produced in Courtaulds' new plant at LeMoyne, Alabama. 13 basic colors are available in these deniers and staple lengths. 1½ denier — 1 9/16" staple, 3 denier — 2" staple

COURTAULDS, INC., *first name in man-made fibers, first name in solution-dyeing*
600 Fifth Avenue, New York 20, N. Y. • Greensboro, N. C. (P O Box 1267) • LeMoyne, Alabama

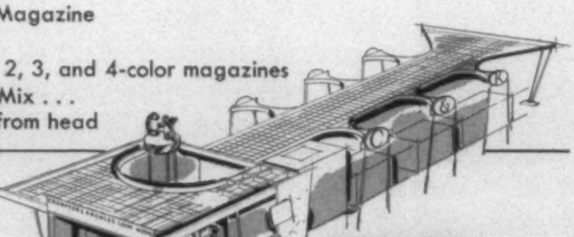
See C&K's

New MP Looms



C&K'S NEW MULTI-PURPOSE LOOMS give you wider versatility than any weaving equipment built today. Here is the principle:

To this Basic Frame: . . .	**Add these Motions:**
Loom Sides	Any Take-up
Cross Girts	Any Shedding Mechanism
"A" Girts	1, 2, 3, or 4-color Rotary Magazine
Drive & Shipping	Any Let-off
Protection	Vacuum Filling Control: On 2, 3, and 4-color magazines
Picking	Box Motion: Call or Filling Mix . . . geared type or operated from head



These are the basic facts on C&K's NEW MULTI-PURPOSE LOOMS. Now, for the full story on what they can do for *your* profit picture, *make C&K's exhibit your first stop at the Show* . . . and see new standards of weaving performance in the making.

TEXTILE MACHINERY
AMERICAN
ASSOCIATION
EXHIBITION
ATLANTIC CITY APRIL 26 30 1954

Here's where to see C&K's New Looms at... Booths 323 to 338—330AA to 331AA

C&K
A Loom for Every Woven Fabric

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Fabrics . . . which are **WOVEN** Fabrics.

Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

Philadelphia, Penna. · Charlotte, N. C. · Allentown, Penna.
Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

This new Robbinette* Ring has a finish which is the result of many years of cooperative research between Saco-Lowell technicians and the steel manufacturing industry. Testing and trial run reports show that its all-around performance is far superior to that of any other spinning ring.

This Saco-Lowell Robbinette* Ring is suitable for cotton, wool, paper, glass and all synthetic fibers and blends. Robbinette* Rings break in rapidly and easily — and once in operation, they increase the life of the traveler and decrease the number of ends down per MSH.

Robbinette* Finish is now standard on all of our rings for both spinning and twisting without extra cost.

***A product of the Pawtucket Spinning Ring Company, the Ring Department of Saco-Lowell Shops.**

TEXTILE MACHINERY
AMERICAN EXHIBITION ASSOCIATION
ATLANTIC CITY
APRIL 26-30 1954

SACO-LOWELL
60 BATTERYMARCH STREET, BOSTON 10, MASS.
Shops at BIDDEFORD and SACO, MAINE; and SANFORD, N. C.
SALES OFFICES: CHARLOTTE • GREENSBORO • GREENVILLE • ATLANTA

exceptional in pastels

for sun, surf and sports wear

NATIONAL CARBANTHRENE YELLOW FFRK PASTE

Another example of the many exceptional colors in National Aniline's fast-growing line of vats, Carbanthrene Yellow FFRK is one of the fastest to light yellows, particularly in pastel shades.

This versatile dye also has excellent fastness to washing, boiling, soap, fulling, perspiration, water, sea-water, peroxide and chlorine, bleaching and stoving. It is, therefore, applicable to all types of cotton and viscose dyeing and especially to yarns that are subsequently to be mercerized, cross-dyed, or bleached. Naturally, it is excellent for beach and sports wear.

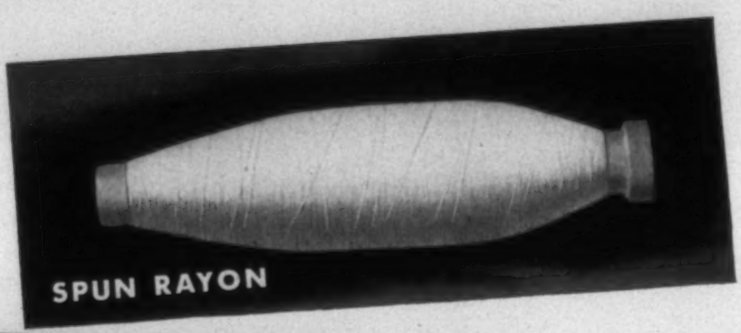
Phone our nearest office for working samples of Carbanthrene Yellow FFRK, for technical help on any difficult dyeing problem or for prompt delivery on your routine dyestuffs needs from warehouse stocks.

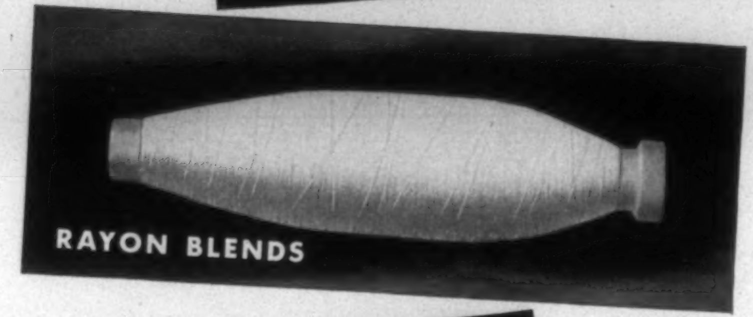
NATIONAL ANILINE DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 RECTOR STREET, NEW YORK 6, N. Y.
Boston Providence Philadelphia Chicago San Francisco
Portland, Ore. Greensboro Charlotte Richmond Atlanta
Columbus, Ga. New Orleans Chattanooga Toronto

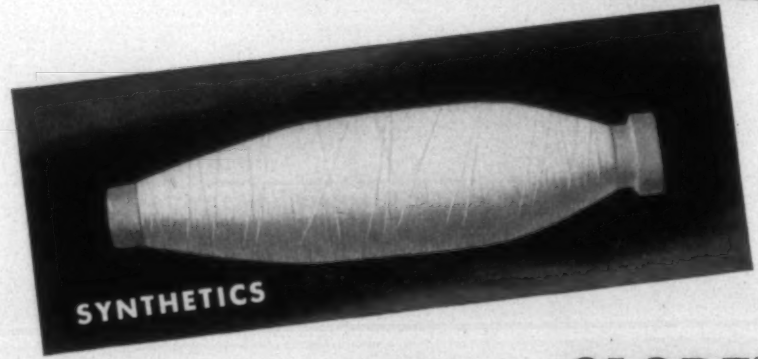
You can cut bolster wear..

. . . by switching now to Sinclair LILY WHITE OIL BX. There's less metal to metal contact when you start up because of the *special film strength* and *oiliness agent* in this superior oil. It protects bearing surfaces against rust, too. Let a Sinclair Lubrication Engineer help you solve your lubrication problems — *there's no obligation.* Contact your local Sinclair office or write Sinclair Refining Company, 600 Fifth Avenue, New York 20, N. Y.

SINCLAIR LUBRICANTS







Why a **GLOBE**® Gum is a preferred size for spun rayon, spun rayon blends and synthetics

Especially developed for sizing spun rayon and blends of spun rayon, Globe Brand Gum de-sizes readily. It forms a smooth, tough size that eliminates considerable breakage on the slasher and loom. Globe Gum delivers the size concentration you require due to its greater uniformity and stability of viscosity.

Globe Gum is manufactured under rigid controls to meet your size requirements exactly.

Free technical service . . . Our technical staff welcomes the opportunity to help you solve your production problems. No cost or obligation on your part. Write today.

CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.

GLOBE
BRAND

TYPE K REBUILDING SERVICE

PAYS OFF

IN BETTER CLEANING RESULTS

IMPROVED PERFORMANCE

If your Type K Bobbin Cleaner has been in use for several years, it may need substantial repairs. On older machines the addition of late, improved, assemblies will greatly increase its efficiency and economy.

UNINTERRUPTED SERVICE

We acquire machines of various models and bring them up to date. We ship you one of these completely remodeled machines, set up to handle your bobbins, ready to be put into immediate operation in your plant. This rebuilding service has been in use for several years and mill men are highly pleased with its economy and convenience.

SEE MODERN REBUILT TYPE K AT ATLANTIC CITY SHOW

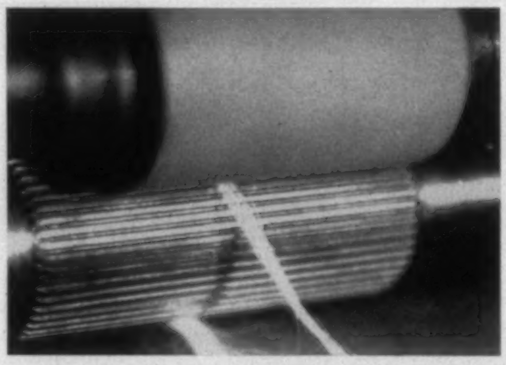
THE

Terrell

MACHINE COMPANY, INCORPORATED
CHARLOTTE, NORTH CAROLINA

Tests like these showed mill men Armstrong's NO-742-S Cots

STOP SERIOUS



**WITH REVOLVING CLEARERS,
USE THE LAP-RESISTANT J-490 COT**

For spinning fine yarns, and for any count yarn with revolving clearers, Armstrong's J-490 Accotex Cots are used in thousands of mills. Special electrolytes added to the J-490's long-wearing synthetic rubber composition make it highly resistant to lapping. The J-490 runs exceptionally clean, too—it's not affected by oil, dyes, or commonly used textile solvents. If lapping's a problem, call your Armstrong man today and arrange for a test side of these lap-resistant J-490 Accotex Cots.

THREE YEARS of testing and experience in mills all over the country prove it: you can eliminate even the worst eyebrowing with Armstrong's newest Accotex® Cot, the NO-742-S.

Here's what mill men who have tested the NO-742-S say. "Your new cot," reports one supervisor, "cleared up a bad eyebrowing situation in my spinning room. Now, with normal picking and buffing schedules, you can't find an eyebrow in my spinning room."

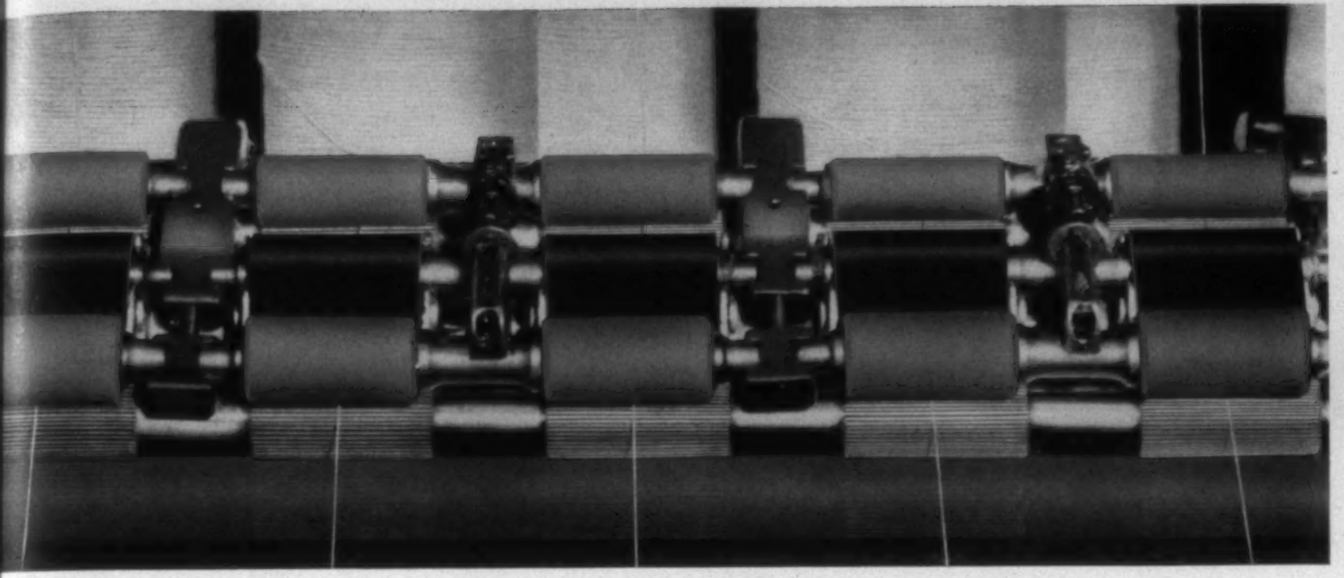
An overseer reports, "After the test had been running a few months, I could tell which rolls were covered with those new cots without even lifting the clearer boards. When all the others had eyebrows, the NO-742-S cots didn't."

Only one re-buffing per year. A third mill man likes the low operating cost of NO-742-S cots. "I'm amazed they run so clean and so long without slicking or glazing. In fact, we only have to re-buff them once a year."

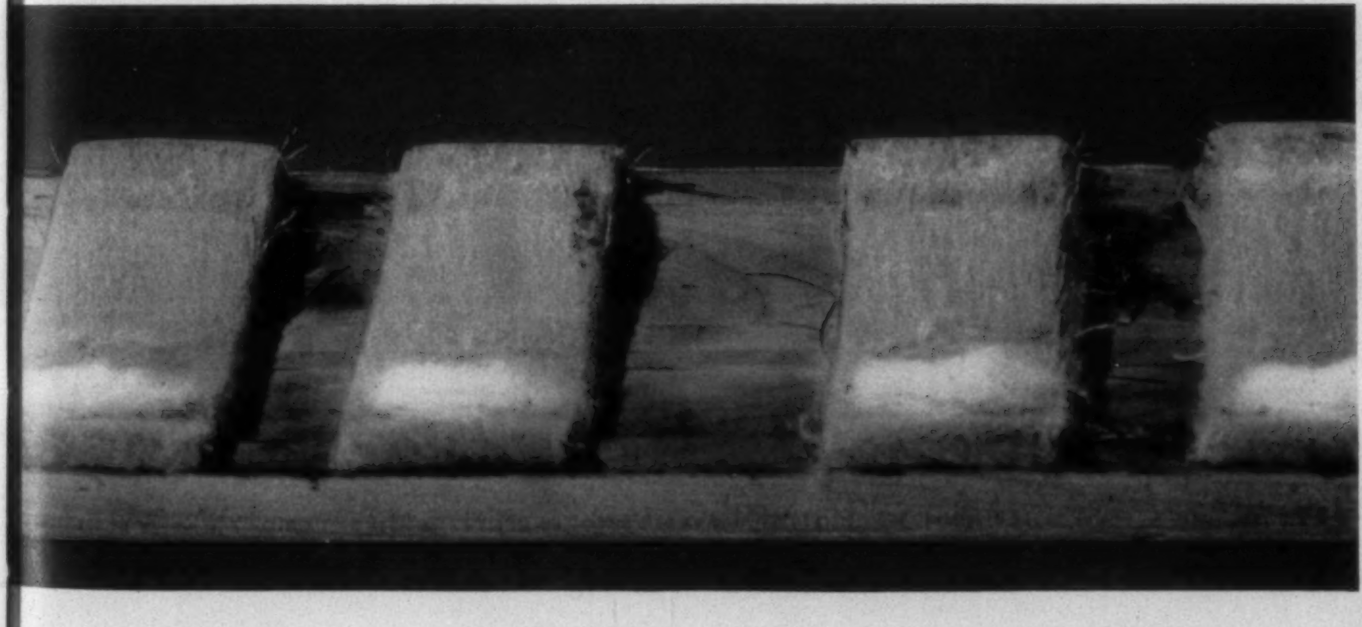
If you haven't seen an NO-742-S cot yet, ask your Armstrong man to show you one. In your hand, you can see and feel the "bite" of its unique drafting surface. It's this "bite" that packs waste well back on the clearer felt. That's the secret of the NO-742-S and its success in eliminating eyebrowing.

If you have trouble with eyebrowing in your spinning room, try a test frame of this newest Armstrong cot. Call your Armstrong man or write Armstrong Cork Co., Textile Products Dept., 6504 Davis Ave., Lancaster, Pa. Available for export.

• • • • • • • • • • • • • • • • **ARMSTRONG'S**



EYEBROWING



Here you see why mill men are so enthusiastic about the eyebrow resistance of Armstrong's NO-742-S spinning roll cover. This clearer board was removed from a spinning frame when it was time for normal picking. Waste has been packed well back on the clearer where it can't drop off. These Accotex Cots had been running on 30-count yarn over six months without re-buffing when this photograph was taken.

ACCOTEX COTS • • NO-742-S • J-490 • NC-727 • • • •

Parks-Cramer
Loom Cleaner

What it is . . .

Blowers in tandem traveling continuously over the looms.

Simple track system, located at looms, leaving upper room areas clear.

Non-loading, paddle type fans.

Air currents directed close to loom surfaces.

Fixed and oscillating air outlets, individually adjustable for direction and velocity, with flexible extensions.

What it does . . .

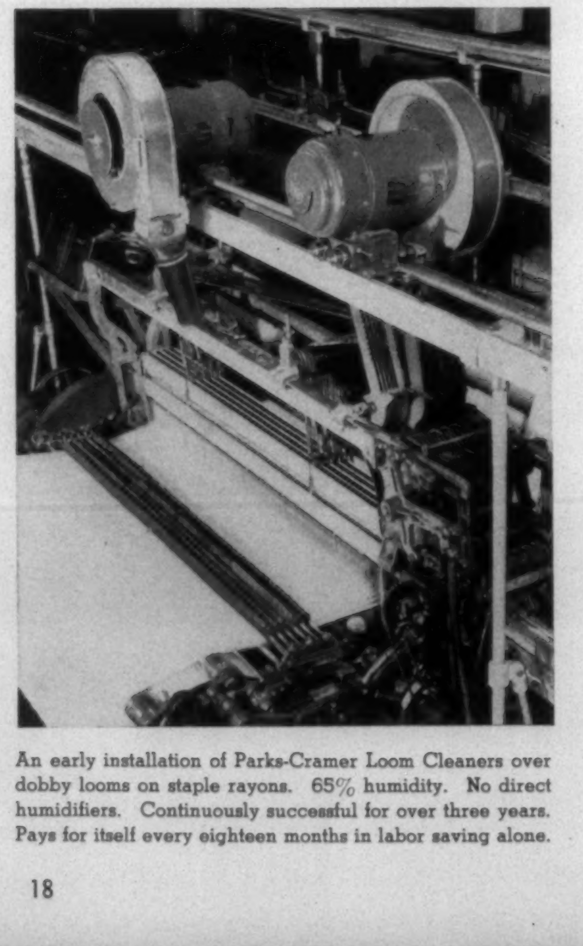
Passes over each loom every five to ten minutes.

Delivers air currents onto arch, harnesses, drop wires, stop motions, transfer motions, harness motions, lay, shuttle boxes, beam, yarns and fabric.

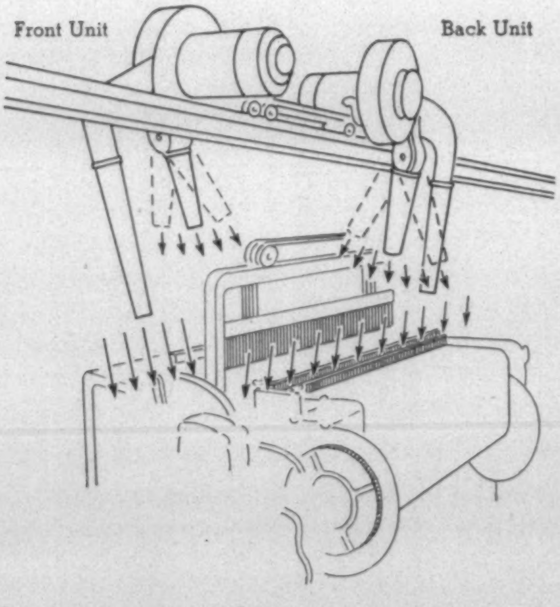
Prevents objectionable lint accumulations between warp-outs.

Eliminates most hand cleaning by compressed air. Lessens loom stops. Increases production.

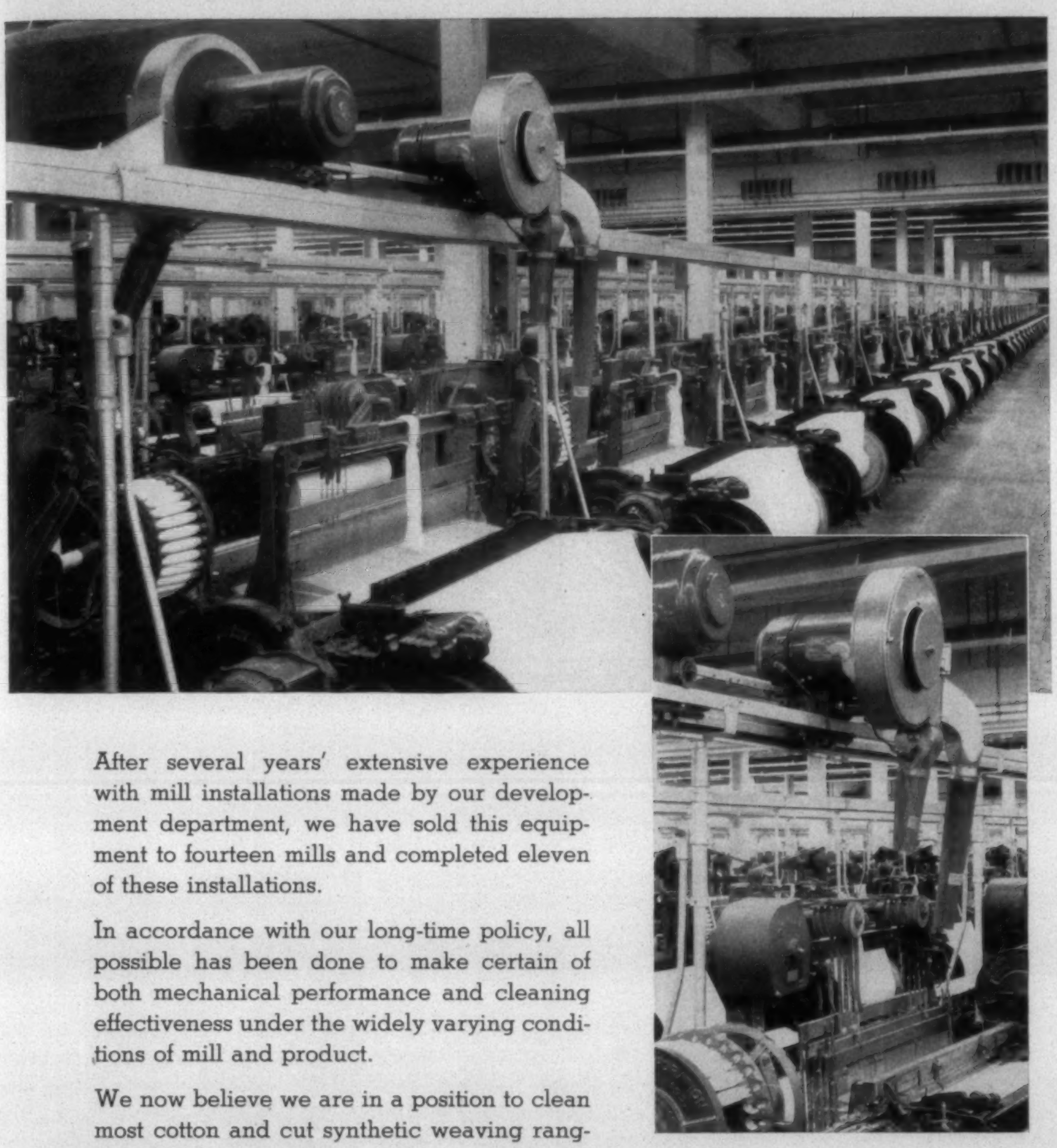
Greatly reduces woven-in lint, oil spots, set and start-up marks, skips, floats, and pick-outs.



An early installation of Parks-Cramer Loom Cleaners over dobby looms on staple rayons. 65% humidity. No direct humidifiers. Continuously successful for over three years. Pays for itself every eighteen months in labor saving alone.



Air where you want it! Long impregnated cloth air outlets on each unit are fixed. Short impregnated cloth air outlets on each unit oscillate back and forth through adjustable arcs as indicated. Provision for momentary reduction of air from any outlet when passing over critical areas. Safe, rugged track system, largely self-cleaned. No exposed electric conductors.



Loom Cleaners over cotton weaving. 80% humidity. Direct humidifiers and Airchanger. Excellent results. Mill enthusiastically reports 1½% increase in weave room efficiency, 2% less seconds. In addition, system pays for itself every two years in labor saving.

After several years' extensive experience with mill installations made by our development department, we have sold this equipment to fourteen mills and completed eleven of these installations.

In accordance with our long-time policy, all possible has been done to make certain of both mechanical performance and cleaning effectiveness under the widely varying conditions of mill and product.

We now believe we are in a position to clean most cotton and cut synthetic weaving ranging from print cloths woven under high humidity on older looms to fine goods turned out by plain and dobby looms at lower humidities.

For further information and recommendations concerning installation in your weave room, consult

Parks-Cramer Company

FITCHBURG, MASS. CHARLOTTE, N. C. ATLANTA, GA.

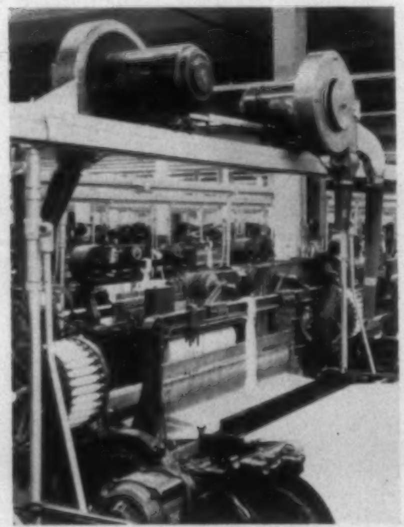
For the Textile Industry's Use

— NEW MACHINERY, EQUIPMENT AND SUPPLIES —

Weed Killer

A new type of weed killer has been added to the outdoor products line of the C. B. Dolge Co., manufacturer of chemicals for maintenance. Known as N P Weed Killer, it is a readily soluble powder that requires no agitation to keep it in suspension. According to the firm, N P Weed Killer can be sprayed or sprinkled or used as a dry powder. It is said to be quick acting, non-flammable, non-volatile, non-corrosive and non-selective. The company states that even the most inexperienced can handle N P Weed Killer with confidence. (Request Item No. D-1)

Parks-Cramer Loom Cleaner



The Parks-Cramer Type CTL loom cleaner as installed in a mill.

Details of the Parks-Cramer loom cleaner, Type CTL, have been released by the company after 5 years of development and mill trials. The company reports that the traveling cleaner has performed with excellent results over both cotton and staple rayon looms, and will soon be available for widespread application. Traveling continuously at 60 feet per minute without interruption on a simple track system over the looms and with air outlets—both oscillating and stationary—the new cleaner reportedly reaches down to within a few inches of surfaces to be cleaned. Entirely mechanical except for the motor which drives the blower unit, the loom cleaner essentially consists of connected right and left-hand blower units, each with motor-driven non-loading, paddle type fan surrounded by a fixed air distributor. The air distributor terminates in one adjustably fixed air outlet and one hinged outlet operating through an adjustable arc by a crank from one of the track wheels. The company states that provision is made for automatically reducing or interrupting momentarily air currents over certain loom motions or areas where full air velocity might be harmful. It can be used in rooms where either high or low relative humidity is maintained and where either cotton or man-made staple yarns of fine or coarse numbers are woven, it is said. The loom cleaner will be exhibited by Parks-Cramer at Atlantic City. For recommendations concerning installations in weave rooms, write the Parks-Cramer Co., in care of this publication. (Request Item No. D-2)

Humidifier & Humidity Control

American Moistening Co. has released new data on 2 new Amco products—the Amco Model 35 humidifier and the Amco Cyclestat humidity control. The Amco Model 35 humidifier is designed to furnish humidification in small or large areas of light heat concentration where cost of other types of humidification might be prohibitive, or to provide additional humidification where a system is already installed. When it is in operation, a precision, propellor-type fan draws room air into the rear of the unit and forces it around the periphery of an atomizing disc which rotates at high speed. Some of its features are that it requires only water and electrical connections; uses a positive, directional, long-throw air vapor jet; one motor drives both fan and disc; simplicity of construction that insures ease of maintenance.

The Amco Cyclestat humidity control is designed to maintain relative humidity in textile work areas at a given setting by use of an automatic pilot. The company states that the jeweled mechanism of this new Amco control anticipates both the normal and unusual conditions that call for more or less moisture and thereby holds the relative humidity constant. The company also points out that in the event of electric power failure the Amco Cyclestat humidity control "fails safe" with humidifying equipment shut off. Both models will be displayed by Amco at the American Textile Machinery Exhibition. (Request Item No. D-3)

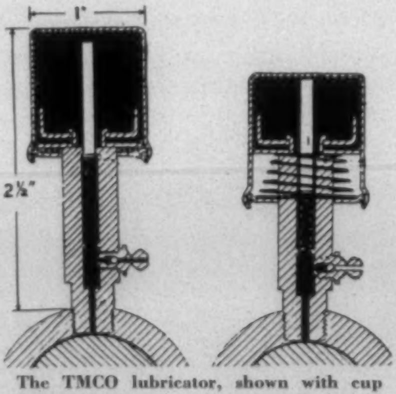
New Dyes Offered By Aniline

National Aniline Division, Allied Chemical & Dye Corp. has announced the development of 3 new dyes—Solantine Blue GLFV, Chromolan Red GRE and Carbanthrene Olive G Paste. Solantine Blue GLFV is a fast-to-light, non-dusting direct dye that produces moderately bright shades of blue when dyed on cotton or rayon. Medium-depth dyeings on rayon are given maximum A.A.T.C.C. rating for light fastness and although resin finishing for crease resistance alters the shade slightly brighter and greener, the light fastness suffers little impairment, it is reported. The addition of National Naccufix to urea-formaldehyde resin finishes results in a marked increase in washing fastness, it is said, and no loss in light fastness. This product is recommended for the production of ladies' dress goods and suitings, sport and play clothes and especially those materials that are to be resin finished and subsequently subjected to prolonged exposure to sunlight.

Chromolan Red GRE is a non-dusting, pre-metallized acid dye that produces moderately bright shades of yellowish red when applied to wool. It reportedly exhibits very good to excellent fastness to light, washing, perspiration, carbonizing and cold water bleeding. It is especially recommended for dyeing un-neutralized carbonized pieces and other woolen materials in a highly acidic condition, including materials that have been acid chlorinated. It is recommended for coloring carpet yarns, knitting yarns for hosiery, sweaters and bathing suits, as well as for high-grade ladies' dress goods.

Carbanthrene Olive G Paste is a type of anthraquinone vat dye that produces true yellowish-olive shades on cotton and rayon. The company states that it reduces readily at 140° F. to a dull green leuco, is usually dyed at 120° F., and requires the addition of salt only in heavy shades because of its excellent affinity. It is highly recommended by the company for the production of materials that are to be subjected to excessively hard usage such as sport and work clothes, uniforms, draperies and weatherable upholstery materials. (Request Item No. D-4)

TMCO Automatic Lubricators



The TMCO lubricator, shown with cup full at *left*, and with cup half full at *right*.

E. H. Jacobs Northern and Southern Divisions of The Bullard Clark Co. have been appointed exclusive distributors for the

...BUT 3 BRAND NEW MACHINES

for the WHITIN American System

the only completely integrated unit—now available for processing worsted, synthetics and blends

Now for the first time all three machines necessary for the production of worsted, synthetic, or blended yarns on the American System are available from Whitin. The new and remarkably versatile WHITIN ROTO-DRAFTER processes top. The new WHITIN QUIK-SET Roving frame will accommodate worsted sliver weighing up to 120 grains and 100% synthetic sliver weighing up to 100 grains. The new Whitin American SUPERFLEX Spinning frame, like the QUIK-SET Roving frame, has top arm roll suspension and new weighting arrangements. A well matched trio of outstanding textile machines for quality production and profits . . . **the Whitin-American System Way!**

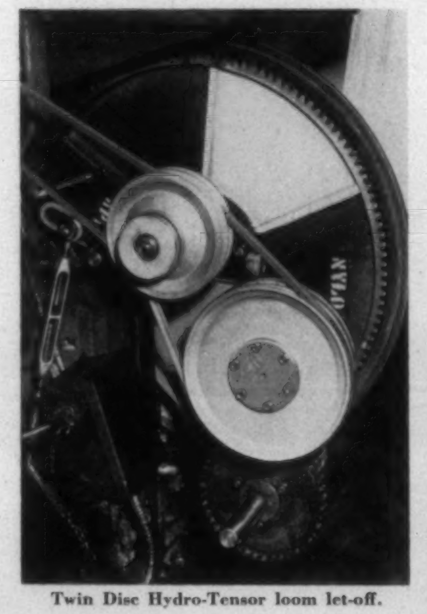
Complete descriptive literature on all of these machines is available.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS
CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

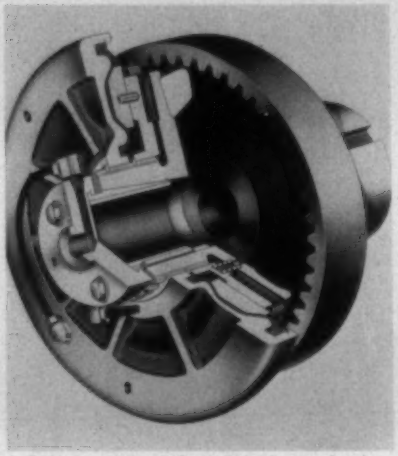
textile industry of the new TMCO automatic lubricator. These TMCO lubricators are made by the A. L. Watson Co. TMCO automatic lubricators are said to be the only automatic self-feeding pressure grease cups on the market today which provide for a visible dependable control through what might be termed an individual grease gun on each bearing. According to the company TMCOs eliminate oil spotting of fabrics, waste greasing, fire hazards, accidents by slipping, and at the same time reduce labor cost, due to greasing, and lubrication costs by 75%. These lubricators will be on display at the American Textile Machinery Exhibition in Atlantic City. Further information may be obtained by writing this magazine. (Request Item No. D-5)

Twin Disc Machinery Drives



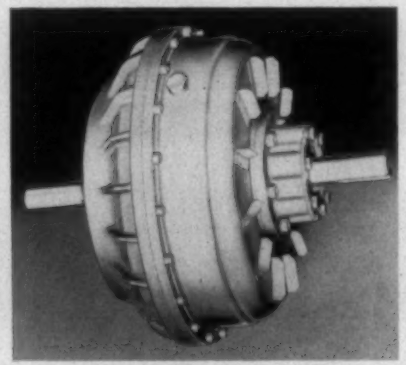
Twin Disc Hydro-Tensor loom let-off.

Announcement of 3 new textile machinery drives—both friction and fluid—has been made by Twin Disc Clutch Co. The new fluid drives are the Hydro-Tensor, a completely new loom let-off; and the newly-designed Hydro-Wynd drive. The new friction drive is the Model PT air-actuated loom clutch. The new Hydro-Tensor—or loom let-off drive—combines fluid coupling characteristics with a unitized arrangement of V-belt and chain drives. By incorporating fluid coupling operation, the Hydro-Tensor reportedly maintains uniform tension from full beam to empty beam. During week-end shut-downs or other prolonged periods, the Hydro-Tensor relieves tension in the warp to reduce end breakage and minimize start-up marks. The company states that it permits unlimited positioning of cloth fell and re-establishment of initial weaving tensions.



Cutaway view of Twin Disc loom clutch.

In the new Model PT air-actuated loom clutch, pressure to the clutch plates is applied by direct air pressure in an expanding chamber. With capacity in direct proportion to the air pressure applied, the air-actuated loom clutch is self-compensating for wear, completely eliminating need of adjustment according to the company. The new loom clutch offers push-button control, from single or multiple stations, and by remaining within proper adjustment assures proper control of the pick. Compact and rugged in construction, the air-actuated loom clutch has fewer working parts and such design features as tapered sleeve hub construction which will accommodate minor variations in shaft size and make it readily applicable to existing looms, or easily designed into new machines. The new Model PT can also be used as a brake, and is also applicable to other textile machinery.



Twin Disc Model 12.2 Hydro-Wynd.

The Twin Disc Hydro-Wynd drive is now available in Models 12.2 and 8.4, and offers increased capacity (in the 12.2) with new features—including rearrangement of the gear train, better bearing spacing, and a new carbon-against-Meehanite spring-loaded seal—which the company says gives higher capacity, greater strength, and greatly increased life. Designed to automatically maintain predetermined tension without intermittent adjustment, the Hydro-Wynd drive incorporates a fluid coupling on the input end with a planetary gear set on the output end to control the operation through automatic "slip" of the coupling reacting with the planetary gears—automatically adjusting itself to meet the varying speed and torque relationships as the roll-speed and diameter vary.

Complete information may be obtained on the new Twin Disc textile machinery drives by writing to Twin Disc Clutch Co., in care of this publication.

(Request Item No. D-6)

New Hart Wetting Agent

Hart Products Corp. has added Penetron Conc. to its line of wetting agents. This product, marketed as a clear liquid containing over 60% active ingredients, is said to possess exceptional wetting-out action at very low cost. Using the Draves test with a 3 gm. hook at 40° C., the following sinking times are reported with this product:

Concentration %	Time In Seconds
0.05	9
0.04	13
0.03	25
0.025	45

Penetron Conc. is reportedly useful in neutral solutions, solutions of alkaline builders, salts, soaps, organic acids, and in dilute sulfuric acid. Suggested applications include the use of Penetron Conc. as a dispersing agent to dissolve dyestuffs, giving complete solubility and full color value; for wetting-out in desizing rayon, cotton and acetate goods; prior to bleaching and kier boiling; as an additive to the dyebath on all types of machines and all kinds of colors where increased penetration and uniformity of shade are difficult to accomplish. Complete information about Penetron Conc. can be obtained by writing to Hart Products Corp. in care of this publication.

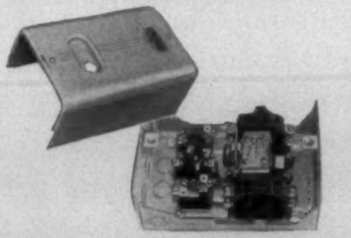
(Request Item No. D-7)

Pour-Lay Concrete

Sauereisen Cements Co. has developed a new acid-proof pour-lay concrete for industrial use. Known as Sauereisen No. 54, the new concrete is reportedly resistant to all acids except hydrofluoric, water, steam, oil, solvents, electricity, and temperatures up to 2,000° F. According to the company Sauereisen No. 54 is ideal for use in chemical and industrial plants, and is highly recommended for use in the construction of floors, sewers, tanks, chimneys, pumps, lining, drains, vats, foundations, towers, etc. The new concrete may be poured into place and leveled off as desired. It is quick setting, and is ready for use in 24 to 48 hours, it is said. It consists of a dry filler and special liquid binder; when the two parts are mixed together the concrete mix is ready to use.

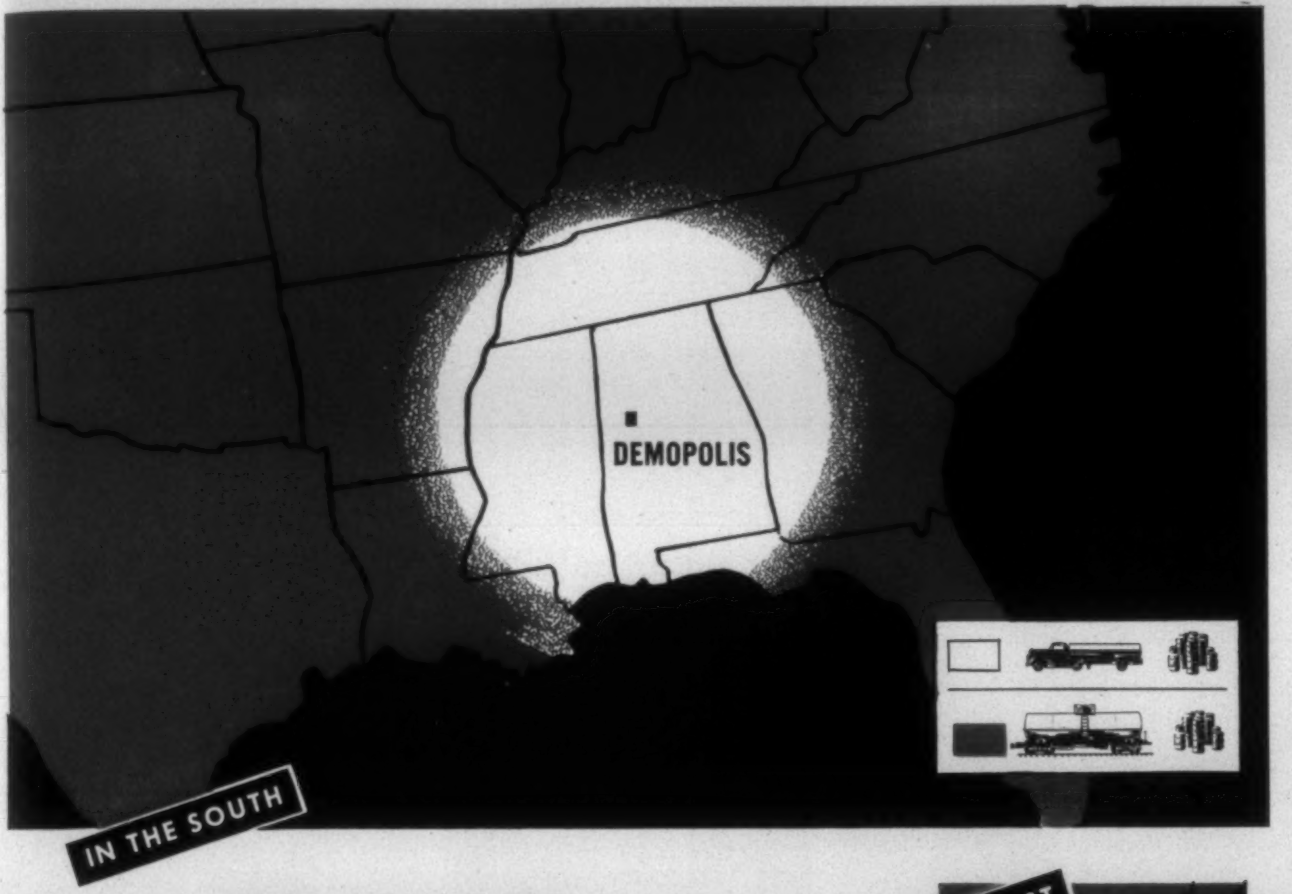
(Request Item No. D-8)

3-Coil Overload Starters



Cutler-Hammer's 3-coil overload starter.

Cutler-Hammer Inc. has announced that after exhaustive research company engineers in co-operation with prominent motor manufacturers have concluded that under many conditions normally found 2-coil overload protection is not enough for industrial motors. A new 3-coil starter is now being



FOR ECONOMY...

Borden's FORMALDEHYDE

Now you can get fast frequent deliveries of formaldehyde especially adapted for textile processing . . . with minimum odor and available to highest standards of clarity by A.P.H.A. tests. If your mill is in or near the circles above and you are using 2000 to 4000 gallons per month, Borden offers you the conveniences and economy of tank truck deliveries. This dependable service saves you the trouble and expense of maintaining large storage tanks and assures you of uniform high quality. Outside the circles your formaldehyde will be delivered in tank cars. In both areas, drums are available in truck and less-truckload shipments.

Specify 44% for greater savings. Borden 44% formaldehyde (inhibited or uninhibited) requires 16% less storage space than 37%. It needs less condensing and distilling for making resins, yields 19% more per batch. Available from Bainbridge, N. Y. or Demopolis, Ala.

Other types available. If desired, Borden will supply 37% inhibited formaldehyde (also known as "formalin", "U.S.P." or "N.F." formaldehyde) in tank cars, tank trucks or drums. 37% uninhibited is shipped in tank cars or tank trucks.

Whichever you need, order Borden formaldehyde. It's made to meet your specifications. Write for a quotation to: The Borden Company, Chemical Division, Dept. TB-44, New York 17, N. Y.

FORMALDEHYDE
HEXAMETHYLENETETRAMINE
RESORCIN
CASEIN
Urea-
Phenolic-
Polyvinyl-
Epoxy-
RESINS

INDUSTRIAL CHEMICALS
THE *Borden* COMPANY
CHEMICAL DIVISION

offered by the company at a slight increase in cost. The 3-coil starters also feature an adjustable heater coil that allows 4 different ratings from a single coil by changing its position. According to the company, this gives motor protection within 3% of usable motor load instead of 10 or 12% otherwise offered. For more information about the 3-coil starter, write for publication EC-20 in care of this magazine.

(Request Item No. D-9)

Electric Drum Heaters

Snap-on heater for 5-gal. drums.

A new line of electric heaters for 5-gal. drums has been announced by Pre-Fab Heater Co. The heaters are especially suited to heating dyes and chemicals for the textile industry and substances which might be damaged by overheating. Heat is applied uniformly at every point around the drum sides, and it can be of such a gentleness that melting points are not exceeded if necessary. The heater wraps around the drum and is held secure with snap fasteners. A blanket of fibrous glass can be used to surround the heater and drum, thereby increasing heat-up speed. Pre-Fab heaters are constructed of alloy resistance wire, covered with suitable insulation for electrical safety and an outer braid for wear resistance. Shown in the photo is a 300-watt heater for melting chemical plastisols. In this case the wire is insulated with glass and silicone, with tough nylon outerbraid. It plugs into a 115-volt circuit. Other sizes and ratings can be built on order to fit a very wide range of operating conditions. For more information, write Pre-Fab Heater Co., in care of this magazine. (Request Item No. D-10)

Du Pont Adopts Trade-Mark

Taslan has been adopted as the trademark for textured yarn made by Du Pont's bulking process, a mechanical method of changing the loft, texture, covering power and feel of normal textile yarns. The mark Taslan is available, under certain quality control conditions, to manufacturers who have been licensed by Du Pont to produce textured yarns on the new process.

A development of Du Pont's textile fibers department, the process was announced in June 1953. Since that time a number of companies have been licensed to produce the yarns. The Du Pont Co. has applied for registration of the trade-mark Taslan in the U. S. and many foreign countries. It has applied for patents on the process and the product, but will itself produce only experimental quantities of Taslan yarn.

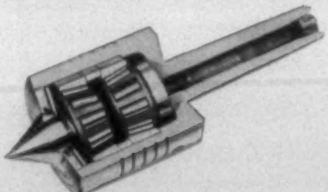
Development work conducted by Du Pont and various licensees is going forward with the aim of producing suitable fabrics for a number of end uses. Under a licensing agreement the following firms are among those who may produce textured yarn: Burlington Mills Corp.; Duffy Silk Co.; Duplan Corp.; Grove Silk Co.; Oscar Heineman Corp.; Hess, Goldsmith & Co. Inc., Atwater Division; Hickory Throwing Co.; Frank Ix & Sons; Kahn & Feldman Inc.; R. K. Laros Co.; Limerick Yarn Mills; Martin Fabrics Corp.; Mid-Valley Textile Corp.; Pepperell Mfg. Co.; Chester H. Roth Co. Inc.; Sauquoit Silk Co. Inc.; Schwarzenbach Huber Co.; William Skinner & Sons; Wittenberg Mills Inc.

This bulking method is designed to be applied to many textile yarns and, therefore should offer wide versatility. The most striking effects have come from applying the process to continuous filament yarns. Taslan continuous filament textured yarns are characterized by many tiny loops in each individual filament of the basic yarn.

It is believed that a variety in both knitted and woven fabrics is possible through use of the new process. Variations depend upon the choice of basic yarns, the number and size of filaments, the number and size of loops and the amount of twist added to the yarn. Increases in yarn size of up to 50% have been achieved experimentally. However, most work has been done with denier increases in the neighborhood of 20% and 30%. In addition an added bulk results from the texturing that exceeds the denier increase. Since bulk and covering power are higher than standard yarns, the process provides yarns with greater opaqueness than many regular filament yarns. In some instances continuous filament yarns have been modified so as to resemble spun yarns. Fabrics of Taslan yarns have a much drier, warmer feel than unprocessed yarn. It is reported that softness or crispness of fabrics may be obtained as the need requires.

(Request Item No. D-11)

Universal Live Center



Ideal's Universal live center.

Extreme accuracy and load carrying capacity beyond most usual requirements are claimed for a new, medium-priced live center introduced by Ideal Industries Inc. of Illinois. Known as the Ideal Universal, the new live center is designed to meet production demands for closer tolerances. Because of its high-accuracy, high-load factors, it is said to offer all the advantages of live centers—high turning speeds, freedom from gouging, burning, chatter and center-point lubrication—for an unusually wide variety of jobs. Eccentricity tolerance is limited to plus or minus .0001" through the use of twin, precision-type roller bearings which are pre-loaded after assembly. The point is then ground in its own bearings after it has been inserted into the live center. A double seal is used to insure maximum service life, with continuous accuracy. A stationary hycar sealing ring in an anodized aluminum cap keeps dirt and chips out. Grease is kept inside the center by a slinger rotating with the point. The housing and all working parts are hardened and ground to provide extra durability. The live center is available with Morse tapers from 2 to 5 for rotating speeds from 50-2,000 r.p.m. and maximum loads to 5,200 pounds. Additional information may be obtained by writing this magazine. (Request Item No. D-12)

Polarizing Microscopes

Polarizing microscope designed for use in the textile industry is shown with the Micro-Lite illuminator.

A new series of polarizing microscopes for use in the textile industry and related fields has been announced by Bausch & Lomb. The new microscopes feature a ball-bearing, low-position, fine-focusing stand previously available only with the Bausch & Lomb line of Dynoptic laboratory instruments and a ball-bearing, revolving stage with one degree graduations and vernier reading to 6 minutes of arc. A ball-bearing double nosepiece with ball stop and true return to centration when changing objectives is employed. Standard equipment is 10X and 45X strain-free achromatic objectives. Substage is of the variable focus type. For protection against dust, optical elements of the flip-in Polaroid analyzer are fully enclosed in the body tube. A bertrand lens, for isolation of small crystal interference figures, is employed. Eyepieces are 7.5X and 10X Huygenian, with crosshairs and focusing eyelenses. Coarse adjustment is provided by a rack-and-pinion, while the fine adjustment is the ball-bearing and roller design found in the firm's laboratory instruments. The instruments can be furnished

Tapes give better service, stay "on the job" longer!

NEW TIGER-TUF Shift-marker SPINNING TAPES

YELLOW STRIPES IDENTIFY THE SHIFT

provide a foolproof shift identification method for checking proper sewing

A COMPLETE SPINNING TAPE SERVICE

These new 1-2-3 stripe Tiger-Tuf SHIFT-MARKER tapes encourage proper sewing by giving positive shift identification. This Coleman-originated method, plus Coleman tape service, brings new production efficiency to your spinning operations.

1-2-3 stripe Tiger-Tuf tapes are available at regular prices in widths of 1/2", 9/16", 5/8", 11/16", 3/4" and 13/16". Also double herringbone leader tapes. Twister tapes available in 1", 1¼" and 1½" widths.

A representative will be glad to demonstrate the cost saving advantages of the complete Coleman Spinning Tape Service. Write or wire today.

COLEMAN COMPANY, INC.
GREENVILLE, SOUTH CAROLINA

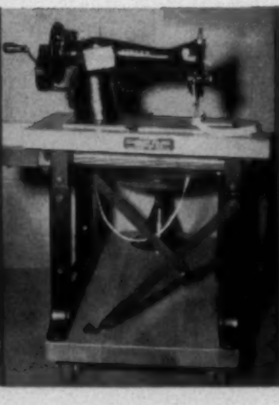
Representatives:

Bill Boger, Charlotte, N. C. Tel. 4-5563

Paul Moreland, Greensboro, N. C. Tel. 4-7218

TAPE RACKS

These Tape Racks, complete with cutting board, enable mills to take full advantage of the shift identification system. Gives uniform length tapes cut under ideal tension which assures proper tension on spindles. Effects great savings in bolster wear. Rack holds three 50 lb. rolls of tape.



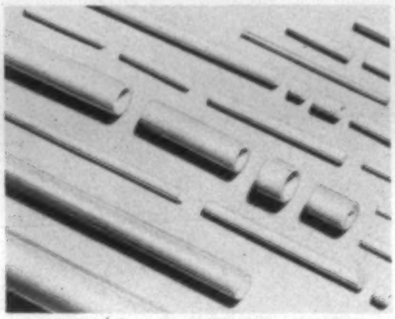
TAPE SEWING MACHINES

Latest Model SINGER Tape Sewing Machines at regular price from our stock. Coleman supplies all sizes of needles. Nylon and cotton sewing threads. Expert sewing machine repairs with an integral substage illuminator—the Bausch & Lomb Opti-Lume—instead of the regular plano-concave mirror.

The instruments are described in detail in a new brochure, *B & L Dynoptic Polarizing Microscopes*, available on request by writing for Catalog D-130, Bausch & Lomb Optical Co., in care of this magazine.

(Request Item No. D-13)

Thread Guide Finishes



AlSiMag thread guide rods and tubes.

In the past few years more and more manufacturers and processors of synthetic yarns have found that proper thread guide finishes are very important for yarn tension control. American Lava Corp. has realized the need for accurate methods of finishing and of measuring finishes and after several years of research on polishing methods, and by use of special equipment to accurately determine surface finishes, definite results have been obtained. By reading finishes in micro inches, R.M.S., it has been concluded that the American Lava Corp. can reproduce given finishes from order to order, lot to lot, and year to year, on designs of rods and tubes only.

Rods and tubes lend themselves to a greater variety of polishing methods than do irregular designs such as eyelets, slotted guides or curved sections. Rods and tubes can be ground by many methods, cylindrical, centerless, table-lapping, etc., and with a great variety of grinding media, all of which produce different finishes.

It has been determined that rods and tubes can be polished as low as 4 to 8 micro inches, R.M.S., and as high as 60 to 80 micro inches, R.M.S. Current, finishing methods are being employed which will produce the following average finishes:

4- 8	Average	Micro	Inch	R.M.S.
8-12	"	"	"	"
12-20	"	"	"	"
20-30	"	"	"	"
30-45	"	"	"	"
45-60	"	"	"	"
60-80	"	"	"	"

These limits are as near as commercial practices on ceramic ware will allow. Closer limits may be held by selective gauging but at an increased cost. Also, special finishes may be adapted to produce higher readings, possible to 150 micro inches, R.M.S., but at considerably higher cost, and with a wider tolerance limit. The type of material specified for a thread guide will affect the results of finishing. For instance, it has been found that AlSiMag No. 192 and No. 193 usually run in micro inch ranges of 4 to 8, 8 to 12 and 12 to 20. AlSiMag 586 will include these ranges but may include 20 to 30. AlSiMag No. 513 will range from 20 to 30 and 30 to 45. AlSiMag No. 491 will range from 30 to 45 but can be produced from 45 to 60 and 65 to 80. Where the application justifies still further processing and consequent higher costs, higher readings than these can be obtained on rods and tubes only. The company suggests discussion of higher reading requirements.

Finishes on irregular contours present individual problems and are being intensively studied in regard to finish limitations. No set standards have yet been developed but the engineers of American Lava Corp. will be glad to discuss individual problems.

(Request Item No. D-14)

Hook-On Volt-Ammeter

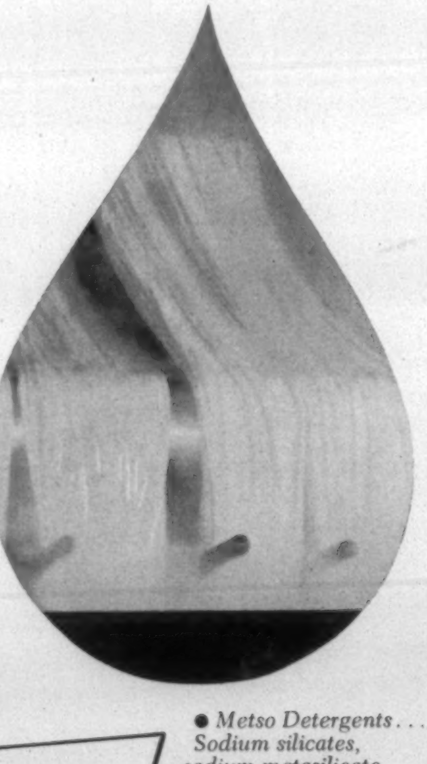
AK-5 hook-on volt-ammeter with automatic scale changing feature.

A new hook-on volt-ammeter believed to be the first with automatic scale changing has been announced by the General Electric Co.'s meter and instrument department. Designated the AK-5, the pocket-size unit is designed to measure current and voltage quickly and accurately. Its automatic scale changing feature entirely eliminates the possibility of reading the wrong scale for the application, according to company engineers. It has a current range of 5/20/80/350 amperes, embracing the extent of currents normally encountered in industrial and commercial circuits. The G. E. device is shock-resistant and is provided with screw-in voltage leads. It weighs 1¼ lbs. and measure 9⅛" by $3\tfrac{7}{16}$" by $1\tfrac{9}{16}$".

(Request Item No. D-15)

Ultrasonic Machine Tool

Sheffield Corp. has stepped up its production of the Cavitron ultrasonic high precision machine tool. The machine, developed by the Cavitron Corp., will be designed, manufactured and marketed by Sheffield exclusively. The machine uses soft cutting tools of steel to cut through the hardest and most brittle of metals and materials. An electrical energy vibrates the cutting tool



Metso Detergent fits continuous wet processes

Look for better whites, better "feel" when you use Metso Detergent. Mills report improvement is often more than 10%.

Metso steps up soil removal in wet processes because it is an aid to soap or synthetics. It emulsifies oils so that there is no floating oil film to re-deposit on the cloth on removal from the bath.

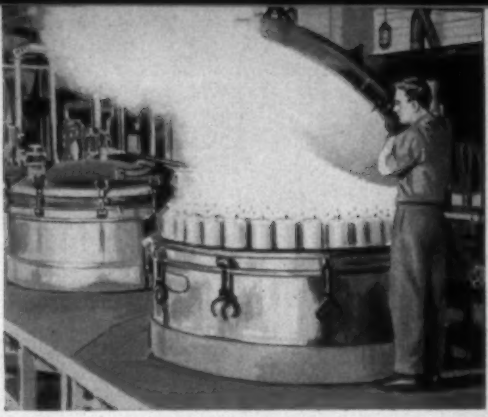
Metso is economical too for less soap or synthetic detergent is needed. Ask for a 16 oz. sample for inspection and tests.

METSO
PQ

Metso® Detergents
PQ® SOLUBLE SILICATES

● *Metso Detergents . . . Sodium silicates, sodium metasilicate, sodium sesquisilicate, sodium orthosilicate.*

Philadelphia Quartz Co.
1170 Public Ledger Bldg.
Philadelphia 6, Pa.



NOW FROM ROHM & HAAS

TRITON AS-35

A stable, high-foaming detergent, wetting agent, and level dyeing assistant

TRITON AS-35 is characterized by high foam, excellent detergency, and good wetting and level dyeing properties. TRITON AS-35 possesses excellent softening and lubricating properties for protecting fiber, yarn, or fabric during severe processing.

For kier boiling of cotton goods, TRITON AS-35 is mutually soluble and beneficial with pine oil, and gives fabrics improved absorbency and greater uniformity. Yet it shows no defects attributable to channelling or scum caused by hard-water soaps.

Its excellent detergency and high foaming properties make TRITON AS-35 extremely effective for soaping off prints.

For scouring piece goods, the cushioning effect of TRITON AS-35 suds minimizes wrinkling and creases.

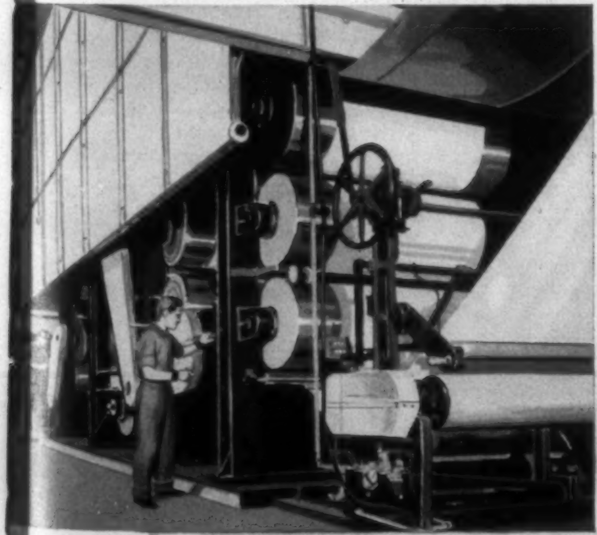
Consider TRITON AS-35 as a level dyeing assistant for fast wetting in acid dyeing, uniform shades of good clarity with direct dyes, and increased dispersion and color value of acetate dyes.

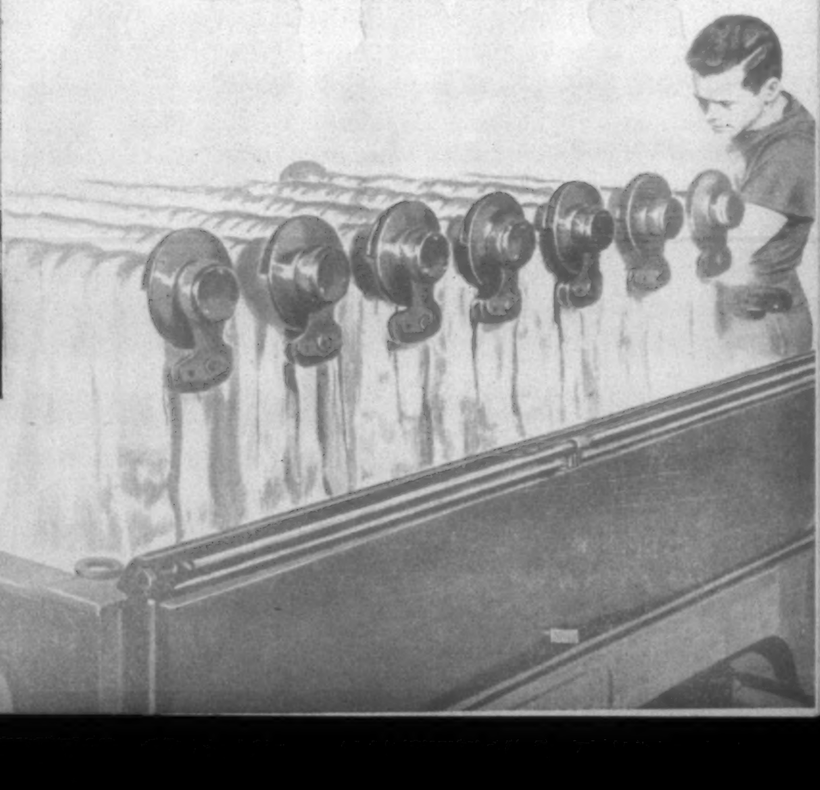
Write today for complete information on TRITON AS-35

CHEMICALS FOR INDUSTRY

ROHM & HAAS
COMPANY
WASHINGTON SQUARE, PHILADELPHIA 5, PA.
Representatives in principal foreign countries

TRITON *is a trademark, Reg. U.S. Pat. Off. and in principal foreign countries.*





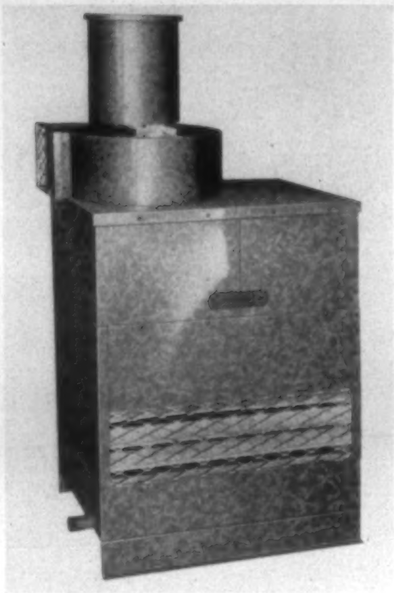
so rapidly that its motion cannot be seen while a liquid abrasive is fed beneath the tool. The tool serves as a hammer and the abrasives do the cutting. A typical job of some of the machines already distributed is cutting jewels from very hard synthetic stones for bearings. As many as 80 jewels, only slightly larger in size than those found in a watch, can be cut simultaneously or a total of about 70,000 a day. The machine is accurate enough to drive a pen point through a light bulb without breaking the bulb or a spoon through a water glass.

Sheffield is represented in the states of Virginia, North and South Carolina by Apex Machine Tool Supply Inc., Charlotte, N. C., For further information concerning the machine, write this magazine.

(Request Item No. D-16)

Acme Cooling Towers

The addition of a 15-ton capacity unit to their line of small cooling towers has recently been announced by Acme Industries Inc. Called the Model JACT, the addition of this unit gives the air conditioning and refrigeration contractor a total of 5 sizes to choose from the Acme line. Capacities of the 5 sizes range from 3 to 15 tons. Besides adding to the line, Acme has redesigned all the units to afford the user maximum efficiency with minimum space requirements. Several possible locations for air outlets were called for to increase the versatility of the units.

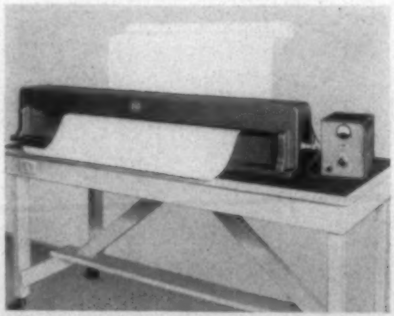


Model JACT cooling tower.

The ever-increasing water problems of certain areas in the U. S. caused Acme to build this small line of cooling towers. They offer the same advantages to small cooling systems that were formerly available only to the giant factory and office installations. The units are capable of conserving 95% of the water used when no tower is installed, according to the company.

All the Acme units are galvanized after fabrication to make them impervious to extreme weather conditions, and suitable for indoor or outdoor installation. The blower and fan system are designed to assure constant capacity—indoor with ductwork or outside regardless of wind conditions. A brochure giving dimensions, weights, pump and fan characteristics, and sample selection procedures for these units is available from the manufacturer on request to this magazine. (Request Item No. D-17)

Electronic Metal Detector



Needles and pins, bits of wire and other tramp metal are spotted instantly by this new model of the R.C.A. electronic metal detector, especially designed for continuous inspection of textiles.

A new electronic metal detector designed to permit continuous inspection of textiles has been developed by the engineering products department of the Radio Corp. of

Installation of Gaston County Dyeing Equipment
at Valdese Manufacturing Company, Valdese, N. C.

GASTON COUNTY FOR LONG-RANGE DYEING ECONOMY

Keep Dye House Costs **DOWN** . . . *Quality* **UP**

Gaston County's flexibility, rugged construction, and Dyemaster controls combine to give you the lowest production costs and the highest quality in modern precision dyeing. Space and labor saving combination machines cut cost while increasing plant efficiency.

WRITE TODAY—LET US SHOW YOU HOW GASTON COUNTY'S OUTSTANDING MACHINES WILL WORK FOR GREATER ECONOMY IN YOUR DYE HOUSE

GASTON COUNTY **DYEING MACHINE CO.**
Pioneers In Automatically *Controlled Dyeing Machinery*
STANLEY N. C., U. S. A.

Gaston County Dyeing Machine Co.
Terminal Bldg., 68 Hudson St.
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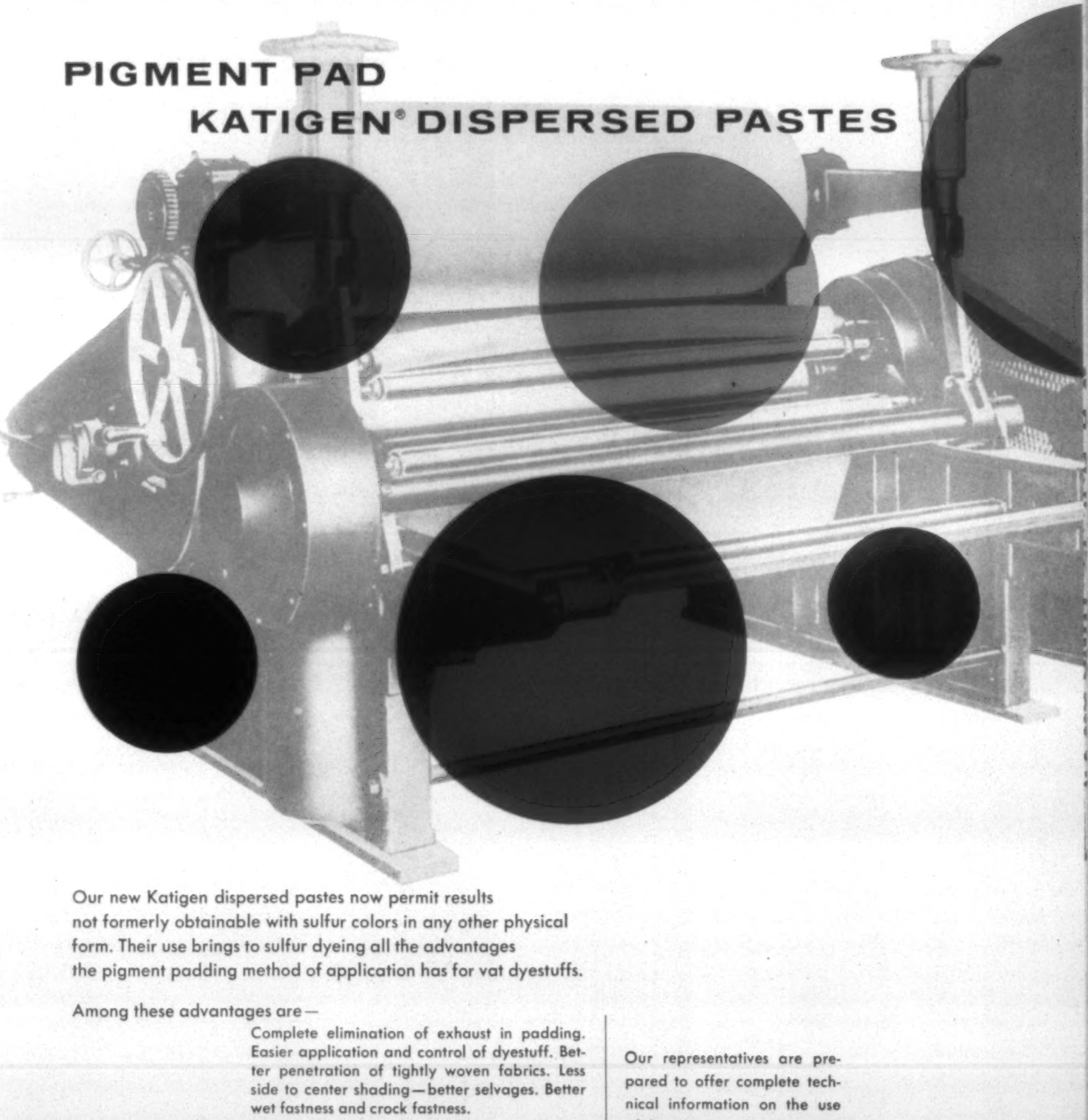
The Rudel Machinery Co., Ltd.
614 St. James St. W., Montreal
137 Wellington St. W., Toronto

be modern...

PIGMENT PAD
KATIGEN® DISPERSED PASTES



Our new Katigen dispersed pastes now permit results not formerly obtainable with sulfur colors in any other physical form. Their use brings to sulfur dyeing all the advantages the pigment padding method of application has for vat dyestuffs.

Among these advantages are—

Complete elimination of exhaust in padding. Easier application and control of dyestuff. Better penetration of tightly woven fabrics. Less side to center shading—better selvages. Better wet fastness and crock fastness.

Application on rayon fabrics may be done by the Genray Process.

Our representatives are prepared to offer complete technical information on the use of this important new group of sulfur dyes.

From Research to Reality

GENERAL DYESTUFF CORPORATION

A SALES DIVISION OF GENERAL ANILINE & FILM CORPORATION
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When Cotton Was a Smuggler's Prize...

Few Realized It Would One Day Be a Staple Fabric of Nations!

Outlawed because manufacturers of silks, velvets and tapestries declared the popular new fabric would ruin them—for nearly 100 years cotton cloth was prohibited in France. Yet the fashion-conscious French women defied laws and danger to wear the precious contraband.

Often their cotton frocks were ripped from them in the streets as government agents tried in vain to enforce the Edict of 1686. Fines, penalties and violence could not stem the demand for the new printed and dyed cottons, however. Secret warehouses were set up; and cotton became the highly prized cargo of smugglers. Finally, authorities bowed to the inevitable, and in 1759 the restrictions on cotton were removed.

Today cotton textiles are a taken-for-granted part of our everyday living. The tremendous advances in production methods plus intelligent merchandising methods have made them generally available for all. Among the important contributions to modern cotton textile manufacture are Staley's sizing and finishing starches.

Staley's starches have proved their superiority in many of the nation's leading textile mills. For information write today.

Staley's Sizing and Finishing Starches for Every Purpose

PEARL STARCH • ECLIPSE®
STA-GEL® • STA-THIK® • DEXTRINS
STACLIPSE • CORN SYRUP

PRODUCTS FROM CORN
Staley's

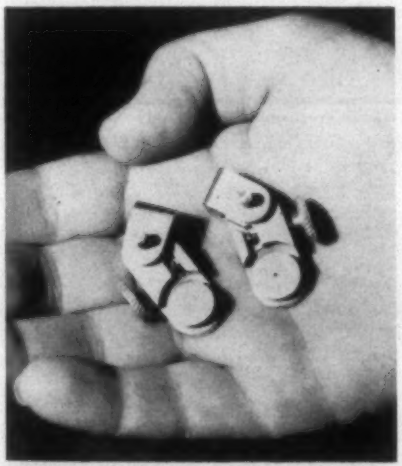
THERE IS A SUPERIOR QUALITY STALEY STARCH FOR EVERY TEXTILE NEED

A. E. Staley Manufacturing Company, Decatur, Illinois

America. The new model features a narrow inspection aperture, available in a wide range of widths. The R.C.A. electronic metal detector indicates the presence of magnetic, non-magnetic, ferrous, and nonferrous metals, including stainless steel, brass, copper, manganese steel and aluminum. It will inspect materials moving at speeds from 25 feet to 1,000 feet per minute. In the textile industry, R.C.A. points out, it will readily detect knitting needles, card wire, joining rods, and other foreign tramp metal which might damage textile machinery or result in product rejection. By reducing equipment damage and downtime, the metal detector increases production and cuts maintenance costs. It also adds to the service life of machinery, and sharply reduces the possibility of personal injury from tramp metal.

R.C.A. electronic metal detectors are built from standard components in any size required by the application — even wide enough to inspect broadloom carpet. For most textile applications, an aperture height of 1" is adequate. However, where required, other heights can be furnished. Further information regarding the application and operation of R.C.A. electronic metal detectors may be obtained by writing to this magazine. (Request Item No. D-18)

Wire Grips For Tensile Tests



Dillon's gripping fixtures for tensile testing.

W. C. Dillon & Co. Inc. has announced the availability of tiny, specially designed gripping fixtures for use in obtaining accurate tensile readings on fine gauge wire, thread, etc. With the gripping fixtures, full tensile stress is not brought to bear on the filaments at the clamping points when tested, but only after they have been passed two or more times around self-aligning drums. The polished fixtures are machined from hardened aluminum and the drums operate on free-swinging pivots so that a true vertical pull is exerted. Measurements of each fixture are $1\frac{9}{16}$" long by $\frac{5}{8}$" wide by $\frac{13}{32}$" thick. Drum diameter is $\frac{1}{2}$"; net weight $\frac{1}{2}$ oz. The testing machine used with the grips is a Dillon multi-low-range tester capable of applying loads of from 0 to 300 lbs. The large 8" dial is calibrated in 4 in-

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¶ Need further information about new products described in this section.

¶ Desire copies of free literature described in this section.

¶ Want additional facts about items or services advertised anywhere in this issue.

¶ Require clarification of or comment on any matter discussed in a technical article.

Then, use the coupon below to advise us of your wants. Be sure to fill in your company's name and your position on the coupon, along with the proper address.

April 1954

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P. O. Box 1225
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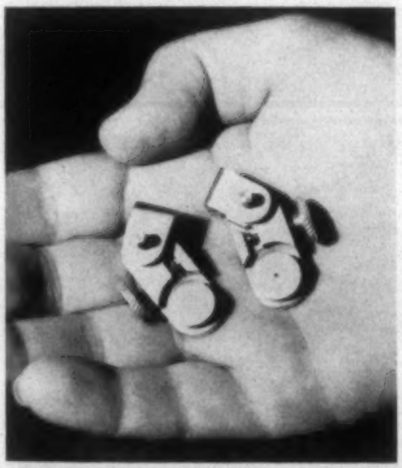

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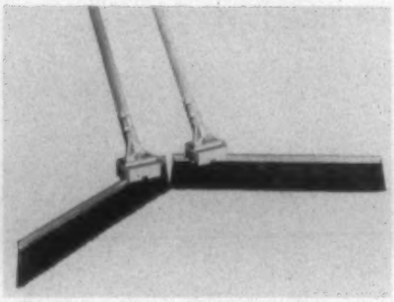
dividual ranges, and graduated in ounces for close readings. Additional information concerning the new grips is available through this publication. (Request Item No. D-19)

Fuller Brush Blade Sweeps



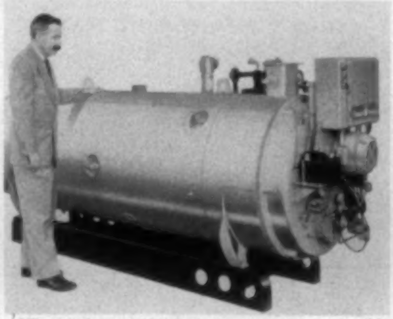
The Fuller Brush Blade Sweep, particularly designed for textile mill use.

A new adjustable, lightweight pushbroom called a Blade Sweep designed to save time in the performance of both ordinary and special sweeping jobs has been developed by the Fuller Brush Co.'s industrial division. Two of these lightweight "sweeps" may be held at angles forming a plow, said to be ideal for moving the large amounts of light, bulky refuse found in textile plants. Blade Sweeps made of softer fibers have been used effectively for speeding up the painting of large floor surfaces. The operator pours paint directly on the floor and with the "sweep" spreads it quickly and evenly. Fuller engineers report that even under extreme conditions Blade Sweeps have been known to last 5 times as long as ordinary brooms. When worn, only the brush strip is replaced. Brush material, or filler, available in Blade Sweeps include synthetics, wire, and such fibers as bassine and tampico. The head clamp which holds the brush strip in place is available in both the multi- or single-position models. The multi-position head allows the brush strip to be set in any of 4 different positions for versatility and performance of special sweeping jobs. An optional metal scraper fits on the clamp head of the single position model at right angles to the brush strip. This is said to be handy for removing well-packed deposits such as grease or mud. The operator merely turns the sweep upside down for scraping. Brush strips are available in lengths from 18" to 36". Special lengths and type of fill are also available. For further information write to The Fuller Brush Co., Industrial Division, in care of this magazine. (Request Item No. D-20)

Cleaning Detergents

Two new cleaning detergents featuring low resoiling, Sipex S and Sipex 802, are announced by American Alcolac Corp. The new cleaners, both lauryl alcohol sulfates, are said to provide consistency of performance for in-plant and location cleaning; are applicable in either hard or soft water; are equally effective on expensive or inexpensive carpets and upholstery and on woolen, cotton and synthetic materials. A brochure, *How To Use Sipex For Rug Cleaning*, may be obtained by writing this magazine. (Request Item No. D-21)

Compact Packaged Boiler



CB packaged boiler is available in 15 to 40 h.p.

A new, compact packaged boiler called the CB, has been announced by the Cleaver-Brooks Co. for use in commercial, industrial, and institutional structures. This new self-contained boiler for processing or heating, steam or hot water use, offers big boiler performance never before available in small units of 15 to 40 h.p. capacity. According to the company five major advantages are incorporated in the new unit. Silent operation, with remarkably low decibel ratings, makes the unit ideal for plants where sound levels are critical. The new CB burns light oils without the difficulties often experienced on gun type burners. Standard equipment on the new CB is the Fireye electronic combustion safety control, assuring greater safety in operation. The new CB boiler has maximum accessibility for operation and maintenance with easy-to-open hinged doors on front and rear of unit. Like other Cleaver-Brooks boilers, the new model burns gas or oil at maximum efficiencies and can be converted from one fuel to the other in less than a minute.

The CB is compactly constructed into one integrated unit, it gives more boiler (maximum 5 sq. ft. per boiler h.p.) in the space normally required for boilers with long burner frames. All operating and safety controls are easily accessible with burner components mounted on the front head. Greater heat absorption is gained in 4-pass construction and minimum efficiencies of 80% are guaranteed by the manufacturer when firing with oil.

This new model, now available in sizes of from 15 to 40 h.p., will be available in 50 to 80 h.p. sizes within a short time. For further information write to the Cleaver-Brooks Co., in care of this magazine. (Request Item No. D-22)

Emulsion Resins

A new series of polyvinyl acetate emulsions, especially designed for textile finishing, has been announced by the resin division of National Starch Products Inc. According to National, these emulsions are ready for use, water-resistant and produce clear, tough films possessing good resistance to dry cleaning. In addition, the resins show good compatibility with starches, synthetic

The Textile Shops

Acid Tanks
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Card Screen Bars and Ribs
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Condenser Screens
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Cowl Ventilators
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  Twisting
Drip Pans
Dye Kettles and Vats (New)
Dry Cans
  New and Repairs
Driers
Filters
Misc. Sheet Metal Work
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Rolls of All Types and Sizes
Size Kettles
Tanks
Waste Screens
Special Machines
  Custom Built

SPARTANBURG, SOUTH CAROLINA, U. S. A.

See us at the Textile Machinery Exhibition
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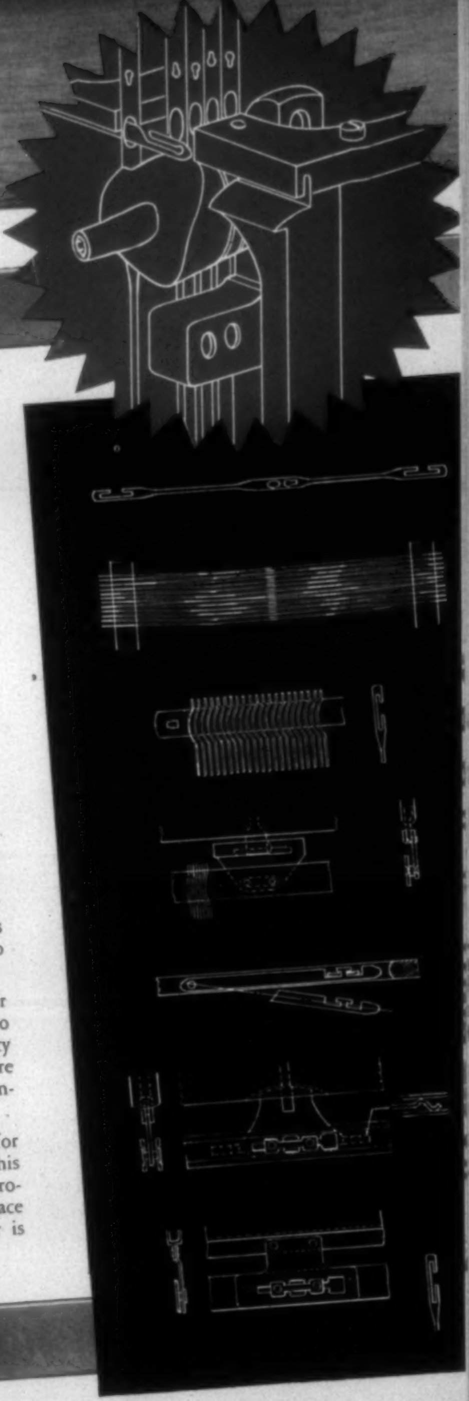
Booth Nos. 365 to 367—374 to 376



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. . . ALL THE ADVANTAGES OF EXPERIENCE, RESEARCH, MODERN DEVELOPMENT AND DESIGN CAN GIVE

It will pay you many times over to consider the benefits available in changing over to the Stehedco Drawtex Frames and Heddles.

Steel Heddle Mfg. Co., universally known for STEHEDCO & SOUTHERN Products that "Weave the World's Needs", in close cooperation with Barber Colman, has developed through its years of experience, and constant research, the *proper* harness for use with Warp drawing in equipment.

Exclusive Steel Heddle Features bring you . . . Freedom from Warp Streaks caused by Harness . . . Longer Heddle Life . . . Fewer seconds . . . Less Harness Adjustment in Looms with Greater Production and Versatility for both heavy and light yarns.

For complete information consult our staff of Field Engineers.

PERTINENT FEATURES YOU PURCHASE . . . AND ONLY SUPPLIED WHEN STEHEDCO IS SPECIFIED.

1. A Heddle made of tempered steel to give Maximum Life so designed that Fatigue Failure is eliminated. Can be furnished in either Carbon Steel properly plated or Stainless. Stehedco Drawtex Heddles are made of tempered steel approximately 7/32" in width to give ample room for selector or keyhold. Cut out at side to reduce weight and resistance to turning when picked off by turning worm and twisted into its proper location for needle to enter eye.

2. A spring effect in each Heddle so release from selector rod of drawing machine is positive. This also speeds up hand entering for those mills not using automatic drawing equipment.

3. Maximum bearing surface, plus ease of assembly with latest Stehedco designed rod support.

4. A simple and effective means for locking Heddle Rod in place and to provide proper tension. Accuracy and close inspection in manufacture assures perfect performance in entering machine.

5. A specially designed Hook for double bar construction where this type Harness is required. This provides a substantial bearing surface for all contacting parts so wear is practically eliminated.

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Textile Supply Co., Dallas, Texas • Charles H. Dunker Co., Los Angeles, Calif.
Albert R. Breen, Chicago, Ill.

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and natural gums, clays, plasticizers, etc. Potential uses in the textile field for this new series of resins include carpets, upholstery, cotton sheeting and draperies.

(Request Item No. D-23)

Mercury Electric Tractor

Mercury Mfg. Co., originator of the Trackless Train system of material handling, has announced a completely new Tug electric tractor, identified as Model No. 550. The new design is available in either twin-three or convention 4-wheel types. Both types are offered in 2 drawbar capacities, with standard model rated at 2,500-lb. maximum drawbar pull, while the heavy-duty model develops 3,000-lb. drawbar pull.

A few of the new design features are: automobile type wheel steering; a new unit-assembled double reduction drive; self-energizing hydraulic brakes; Timken duo-grip, seat actuated mechanical parking brake; 4-speed magnetic contactor travel control with adjustable timed acceleration and controlled plugging, and demountable wheel rim and tire assemblies. Pneumatic tires are optional equipment on the standard 4-wheel model. The drive motor is connected to drive by means of double universal joint for easy removal and self-alignment. Semi-elliptic spring suspension, at front and rear, employs flat springs mounted so that torque reaction is not transferred to driver, resulting in improved riding quality.

For addition information on the new Tug write to this magazine.

(Request Item No. D-24)

NON-FLUID OIL
TRADE MARK REGISTERED

FOR CLEAN LUBRICATION

NON-FLUID OIL is preferred in 7 out of 10 leading mills because first, it gives *more* and *better* lubrication per pound than ordinary oils. Secondly, it keeps *off* goods in process, thereby *cutting* costs and *increasing* production.

Ordinary oils that leak and spatter cause costly "seconds"; NON-FLUID OIL remains *in* bearings and lubricates until completely consumed. Yes, NON-FLUID OIL outlasts ordinary oil 3 to 5 times and thus saves you application *and* lubricant costs.

Learn for yourself why textile men choose NON-FLUID OIL. Write now for free testing sample and instructive bulletin.

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Detroit, Mich.
St. Louis, Mo.
Providence, R. I.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture.

Ball Bearing Pillow Blocks

New, low-cost ball bearing pillow blocks with pressed steel housings, designed for applications where speeds are relatively low and loads are light, have been announced by Link-Belt Co. Combining strength and light weight, the sturdy pressed steel housings reportedly permit a cost reduction which makes these the economical units for light duty applications. According to the company, a precision deep-groove single row ball bearing, self-aligning in all directions, assures smooth operation and long life. Free-rolling action and full load capacity are maintained even with minor shaft deflection or normal misalignment. A long inner ring distributes the load evenly over a large shaft area. The new ball bearing pillow block, Link-Belt Series JPS-200, are available for shafts from ⅝" to 1¼" in diameter. They are easily installed by slipping the inner ring onto a shaft and locking it into position. Slotted bolt holes permit easy lateral adjustment. A synthetic rubber lip-type seal, integral with the bearing, provides maximum sealing efficiency to retain the lubricant, and to exclude dirt—even in extremely dusty and dirty locations it is said. No further lubrication is necessary; the bearings are lubricated for life. Additional information concerning the series JPS-200 bearings is available in a new Link-Belt Folder No. 2517, which includes load ratings and dimensions of pillow blocks. Copies may be obtained by writing this magazine. (Request Item No. D-25)

Opalescent Paint

A new opalescent finish with a light reflectance that suggests third-dimensional depth has been developed by the Sherwin-Williams Co. The interior finish, called Opal-Glo, is designed for application on walls and woodwork.

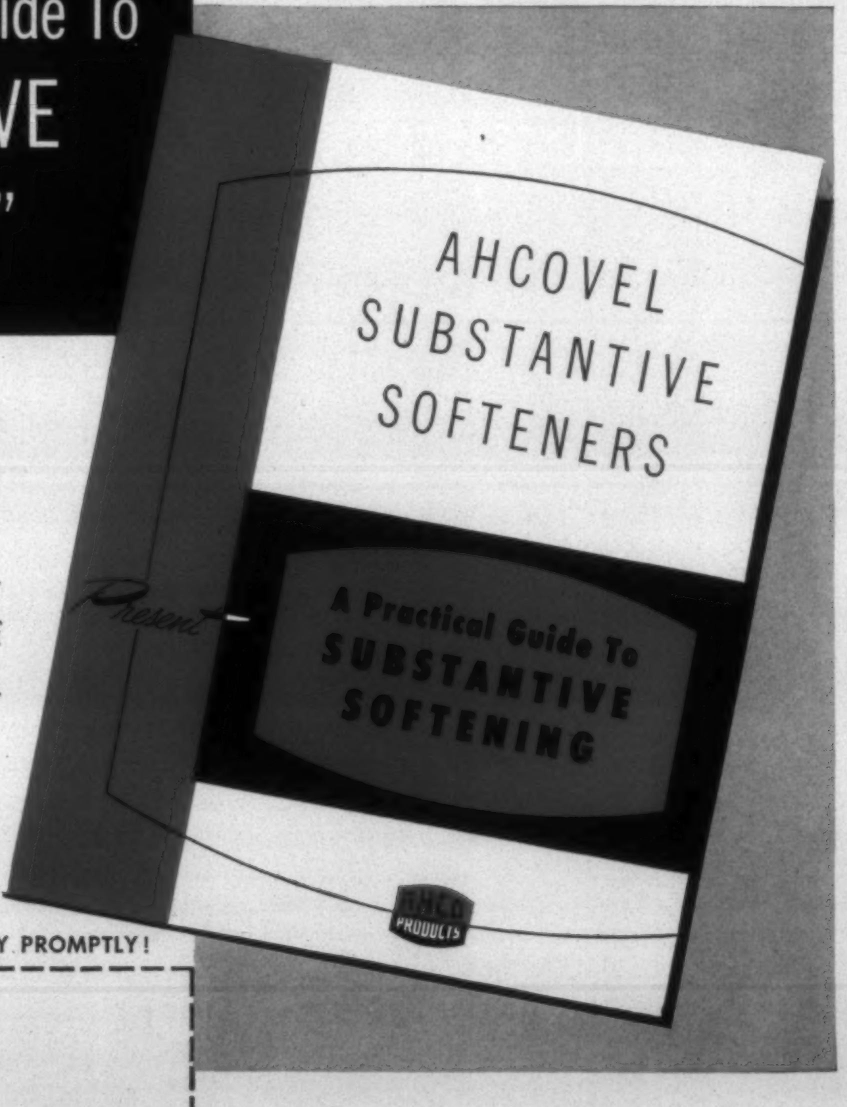
The paint employs the light reflectivity of an aluminum ingredient to achieve a variety of tones. It is offered in 7 colors—gray, rose, aqua, chartreuse, blue, green and brown. Any one of these gives the multi-toned effect.

Opal-Glo is described as an enamel type of formulation with a hard, smooth finish. Under normal conditions it dries overnight, but a 24-hour drying period is recommended if recoating is desired. The paint's washability is excellent. Mild soap and water or a mild detergent should be employed. Abrasive type materials and strong detergents must be avoided. Pencil marks, ink and ordinary stains are readily removed. More stubborn materials, such as crayon, may be wiped off with a cloth or sponge after the area has been rubbed with vegetable shortening. The product may be applied on new and old plaster, wallboard, woodwork and virtually all types of surfaces.

(Request Item No. D-26)

AHCOVEL SUBSTANTIVE SOFTENERS PRESENT

"A Practical Guide To SUBSTANTIVE SOFTENING"



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55 Canal Street
Providence, Rhode Island

Gentlemen:
Please send us your *SUBSTANTIVE SOFTENING* guide.

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City.......... State..........

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from America's fastest growing producer

a new name in glassy phosphates

HEXAPHOS*

WESTVACO SODIUM HEXAMETAPHOSPHATE

Now Available in 2 Grades and 5 Physical Forms

Made wholly in Westvaco plants from basic raw materials of our own manufacture, HEXAPHOS (Sodium Hexametaphosphate) is a true glassy phosphate with superior sequestering and water-softening properties.

Westvaco HEXAPHOS has an optimum P_2O_5 content (67%) and pH (6.7–7.2) for maximum effectiveness as a sequestering and water-softening agent. HEXAPHOS is available in powder, fine granular, coarse granular, flake and plate forms.

For special detergent mixtures, a specialty adjusted grade with a higher pH (8.0–9.0) is available in powder and fine granular forms. Both grades of HEXAPHOS are completely soluble in water.

SEND FOR TECHNICAL BULLETIN

Our new 12-page Technical Bulletin on HEXAPHOS (Westvaco Sodium Hexametaphosphate) contains complete data on properties, analysis and applications in industrial processes; powerplant and municipal water treatment; textile wet-processing; pulp and paper manufacture; and other fields. A copy will be sent without cost.

WESTVACO CHEMICAL DIVISION
SALES AGENT FOR
WESTVACO MINERAL PRODUCTS DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION
GENERAL OFFICES • 161 EAST 42nd STREET, NEW YORK 17
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For the Mill Bookshelf

– NEW CATALOGS, PAMPHLETS, BOOKLETS AND OTHER LITERATURE –

Uses Of Sodium Silicates

Philadelphia Quartz Co., manufacturer of sodium silicates, has published an illustrated folder describing the uses of sodium silicates in textile wet processing. Operations included are bleaching, caustic saturating, kier boiling, scouring and other detergent applications. A convenient tabulation charts each operation, the proper silicate or silicates to use and the desired action. Important related silicate uses in mills discussed are treatment of raw and waste waters and prevention of corrosion in water systems and kiers. Copies are available to textile mill operators by writing this publication. (Request Item No. D-27)

Ultraviolet Absorbers

Antara Chemicals, a sales division of General Aniline and Film Corp., has published a 24-page booklet describing 2 new ultraviolet absorbers, Uninul 400 and Uninul 490. Ultraviolet radiation causes deterioration of many natural and synthetic materials in everyday use. The Uninuls are offered as a means of controlling the harmful effects of radiation within the ultraviolet range, either as a protective coating or for incorporation in these materials. A suggested use of Uninul is in coatings or finishes for textiles from natural or synthetic fibers. A free copy of the new booklet may be obtained by writing this publication.
(Request Item No. D-28)

'Compar-A-Frame' Charts

A drastic change in any set of standards, such as the recent change in a-c motor frame assignment standards set by N.E.M.A., frequently results in confusion. To dispel any possible confusion over old and new mounting dimensions, Reliance Electric & Engineering Co. has produced the "Compar-A-Frame" chart to aid engineers and designers in quickly comparing the old and new N.E.M.A. a-c frame assignment standards. It is expected that it will be especially useful during the interim period when both motor lines are still available for industrial use. The chart serves both as a tool for design and layout of new machinery, and as a handy reference for sales personnel who require a time-saving spot comparison of dimensions.

The single-page "Compar-A-Frame" shows, at a glance, comparative dimensions of open type and fan-cooled type polyphase induction motors. There are sub-charts for comparing frame sizes according to horsepower and speed, and a chart for comparison of dimensions of the old and new frames. For quick reference there are 2 simplified motor outlines to give essential dimensions key to letters. The chart is printed (on one side only) on lightweight cardboard and is punched for insertion in loose-leaf binders. These free charts are available through this publication.
(Request Item No. D-29)

Fast Dyes And Resin Treatments

Publication of a new technical bulletin on direct dyes for resin after-treatment has been announced by the dyestuff dept. of American Cyanamid Co. The publication, Dyestuff Technical Bulletin No. 835, is called *Effect of Resin Treatments on Viscose and Cotton Dyed with Selected Calcomine and Calcodur Resin Fast Dyes.* It was prepared by the company's dyestuff technical laboratories. The bulletin discusses selected direct dyes which possess good fastness to light as self shades and retain good fastness to light when dyed material is finished with resins such as Aerotex Resin M-3, Aerotex 450 or with combinations of resins and copper compounds. Dyeing and fastness properties of direct dyes are shown in detail by tables and graphs. Working properties described cover behavior in different types of dyeing equipment, temperatures of optimum exhaust, fiber effects and dyeing rates. Tables of fastness include fiber staining effects, light and wash fastness of untreated materials and those after-treated with various resins. Copies of the bulletin are available through this publication.
(Request Item No. D-30)

Safety Self-Coupler

Mercury Mfg. Co. has issued a 2-color, 4-page bulletin, M-130, on its safety self-coupler, which is adaptable to any caster-type trailer. Advantages of this coupler are pointed out by the bulletin. This apparatus offers safety of operation since manual functions are reduced to a minimum. There is no necessity for a man to get between a tractor and a loaded trailer or between 2 loaded trailers. Also, tractor-trailer trains can run at any speed over grades and around acute angles with no danger of becoming uncoupled. Trailing qualities of the Mercury self-coupler are excellent. Each trailer will follow the path of the preceding one without whipping and with no appreciable cut-in—even at maximum angle turns. The coupler increases the speed of operation of a tractor-trailer train because the driver can pick up or drop a single trailer, or the first trailer of a train, unassisted and without leaving the machine. It is also possible to sort out unit trailers, form them into a train, and pull away without the assistance of manpower at any stage. Tests have indicated a 40% greater work output for the safety self-coupler over an approved type of manual coupler. Maintenance is negligible because the design is simple and the coupler requires no adjustment.

This coupler can be specified when ordering Mercury trailers or complete assemblies can be purchased for installation on existing equipment. Copies of bulletin M-130 are available from Mercury Mfg. Co., care of this journal. (Request Item No. D-31)

Panelboard Planning

Planning commercial and industrial circuit-breaker panelboards is discussed in a new 16-page booklet available from the Westinghouse Electric Corp. Advantages of De-ion circuit breakers, and of the dead-front breaker panel to both user and contractor are discussed in this booklet. Characteristics of circuit-breaker panelboards that allow modern circuit protection for factory buildings and processing plants also are covered. In addition, a complete line of panelboard equipment is described, and a new panelboard specification—considerably shorter and less time-consuming than the older type—is suggested. For a copy of booklet B-6098, write Westinghouse, care of this journal. (Request Item No. D-32)

Stonhard Maintenance

Stonhard Co. announces a new folder which tells how to solve dangerous and unsightly floor conditions; how to patch or overlay concrete areas that have been ruined by acid, grease, oil or excessive wear; how to harden concrete surfaces and eliminate "concrete dusting;" how to prevent water-seepage and active water leaks in basements, underground foundations, elevator pits, tunnels, dams and reservoirs; how to seal roof leaks and rejuvenate dried out roof areas. Copies may be obtained by writing this magazine. (Request Item No. D-33)

Far-Infrared Radiation

High-speed drying and curing of synthetic textile finishes by means of far-infrared radiation is covered in a new 22-page illustrated folder entitled *The Textile Report,* prepared for the Edwin L. Wiegand Co. This report illustrates typical tenter frame installations, using electric radiant heat for both drying and curing of the synthetic resin impregnations. The radiant equipment is said to be adaptable to existing tenter or pin frames. Installation costs are as low as one-sixth of other heat sources and far-infrared installation reportedly speeds up curing and drying to 60 yds.-per-min.,—producing uniform cure on materials ranging up to 1½ yds.-per-lb., web width to 216", and curing temperatures up to 300°. The long wavelength radiation is adjustable with vernier control to duplicate curing and drying results for any weight, speed, or width of material. The far-infrared radiant heaters are all metal, self-supporting, and are undamaged by moisture or mechanical vibration. The report illustrates highly successful installations of recent years in this growing field. A copy may be obtained by writing this magazine. (Request Item No. D-34)

Viscometer Facts

A new 20-page booklet entitled *Solutions to Sticky Problems* has been announced by Brookfield Engineering Laboratories. The booklet attempts to pass along in easily readable form accurate information on the Brookfield Sychro-Lectric viscometer. It cover such subjects as how the viscometer works, how to make a simple calibration check, how to use a Brookfield for control, etc. Copies may be obtained by writing this magazine. (Request Item No. D-35)

Alemite Lubrication

No Margin for Error, a new sound-slide color film containing answers to lubrication problems, has been released by Alemite, a division of Stewart-Warner Corp. The new educational film takes the audience into a typical industrial plant showing the right and wrong way to handle lubricants from barrel to bearing. On 35-mm. film and lasting 15 minutes, the film presents 5 plans on lubricant handling. These plans range from the simplest hand guns and loader pumps, through bucket pumps and transfer pumps, through portable power guns and transfer pumps, and through power-operated barrel pumps to a complete lubrication department on wheels.

A 12-page booklet, *Five Plans for Better Plant Lubrication*, graphically emphasizes each of the 5 plans on lubricant handling demonstrated in the film. In addition, the booklet points out 7 distinct ways in which good plant lubrication can cut production costs in machine down-time, machine repair and service, waste of lubricant, less man-hours, elimination of product spoilage, less expensive housekeeping and elimination of safety hazards. The film and booklet are available to plant maintenance and production men through this publication.

(Request Item No. D-36)

Electrical Hazards

Crouse-Hinds Co. has announced availability of 2 publication, Bulletins 2655 and 2660. Bulletin 2655, *Condulets for Hazardous Locations* contains a table listing the commercial uses of hazardous substances and their flash points and ignition temperatures; articles 500 and 510 of the 1953 National Electrical Code; and detailed descriptions of explosion-proof and dust-tight electrical equipment conforming to these code articles. The 82-page booklet is illustrated with photos and line drawings.

Bulletin 2660 is the latest of an annually revised series of 16-page bulletins that explain why electrical equipment for hazardous locations is designed and built as it is. The illustrated booklet covers explosion dynamics and why explosion-proof lighting fixtures, control boards and receptacles are necessary for safe operations at Class I (explosive gasses or vapors) or Class I (combustible dusts) locations.

Copies of these bulletins may be obtained by writing this magazine. Those requesting Bulletin 2655 are asked to state their title or function in the request.

(Request Item No. D-37)

Temperature Regulators Guide

A 4-page bulletin describing design and operation features of Spence temperature regulators has been issued by Spence Engineering Co. Inc. Spence temperature regulators feature a pilot, combining both a pressure and thermal element, which changes steam pressure for delivery according to demand requirements. A large cutaway diagram of a typical Spence temperature regulator with a description of construction and parts is presented. Recommended installations of Spence temperature regulators for instantaneous water heaters, storage water heaters and forced air heating systems are shown in 3 line drawings. Write to this magazine for free copies.

(Request Item No. D-38)

Materials Handling Guide

How properly planned materials handling can reduce production costs is explained in a new, non-technical guide published by the Automatic Transportation Co., manufacturer of electric-driven industrial trucks. Entitled, *The Materials Handling Cost Cutter*, the guide is intended to help the general businessman analyze his own materials handling problems. Clear, concise explanations of the "whys" and "hows" of effectively applying mechanized materials handling procedures to manufacturing, processing, and warehousing operations are given. Sections on the advantageous use of manpower, methods simplification, and the meaning and use of flow chart symbols are included. A complete sample flow chart graphically presents all elements in materials flow and handling.

(Request Item No. D-39)

Portable Air Compressors

Joy Mfg. Co. announces a new bulletin on the Joy line of portable air compressors. Economy and operating features are covered in 24 pages of detailed description, specifications and illustrations. This bulletin describes 2 new sizes of Joy portables, 75 c.f.m. and 125 c.f.m. The entire Joy line comprises 6 sizes, including Model 630, which is said to have the largest capacity on the market today. Copies of this bulletin may be obtained by writing this magazine, Bulletin A-55.

(Request Item No. D-40)

EVERYBODY'S TALKING ABOUT...

PENFORD GUMS*

for the warp sizing of Synthetic Staples and Mixtures

*U. S. Patent Nos. 2,516,632; 2,516,633; 2,516,634

PENICK & FORD, LTD.,
INCORPORATED
NEW YORK, N. Y. CEDAR RAPIDS, IA.
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For Every Spot in Your Plant

From the bottom floor to the top of the stack . . . from the loading platform to the President's office . . . you'll get a better paint job at lower cost when you specify famous *Barreled Sunlight** maintenance paints.

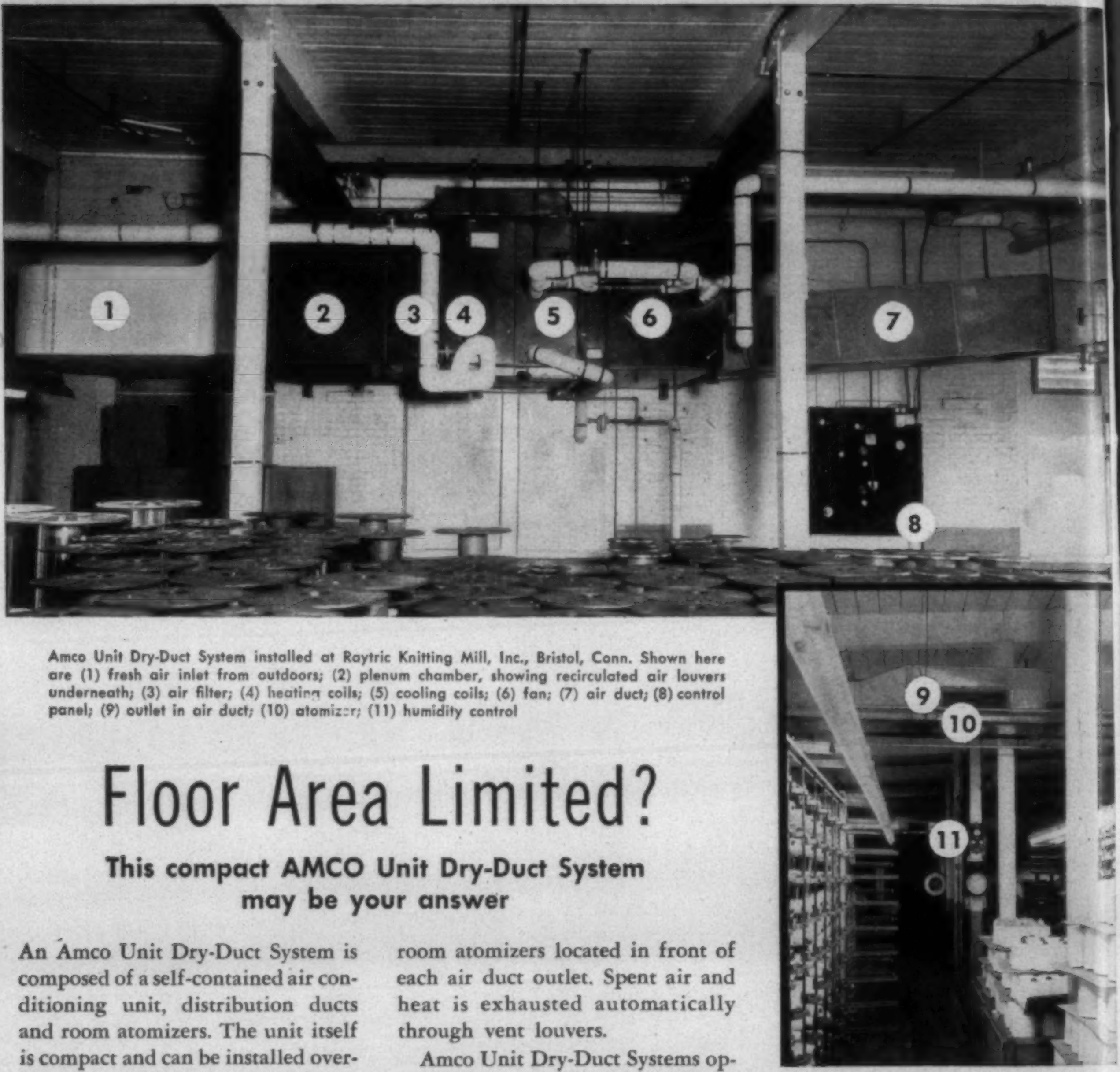
Whatever your painting needs, there's a specialized, *heavy duty* Barreled Sunlight primer and finish to do the job better — and at lower "on the wall" cost both for material *and for the labor which today accounts for at least 80% of total "paintenance" outlay.*

For free descriptive catalog and information on Barreled Sunlight "Engineered Color" survey service, write today on your company letterhead. Barreled Sunlight Paint Co., 5-D Dudley St., Providence 1, R.I.

Barreled Sunlight® Paints

In whitest white or clean, clear, wanted colors, there's a Barreled Sunlight Paint for every job

Exhibiting at American Textile Machinery Exhibition, Atlantic City, Booth No. 262



Amco Unit Dry-Duct System installed at Raytric Knitting Mill, Inc., Bristol, Conn. Shown here are (1) fresh air inlet from outdoors; (2) plenum chamber, showing recirculated air louvers underneath; (3) air filter; (4) heating coils; (5) cooling coils; (6) fan; (7) air duct; (8) control panel; (9) outlet in air duct; (10) atomizer; (11) humidity control

Floor Area Limited?

This compact AMCO Unit Dry-Duct System may be your answer

An Amco Unit Dry-Duct System is composed of a self-contained air conditioning unit, distribution ducts and room atomizers. The unit itself is compact and can be installed overhead, out of the way, where it will not take up valuable mill floor space.

Here's how it operates. Automatically operated louvers introduce into the unit fresh air and recirculated air in proper proportions. The air is filtered, if desired, and then heated as required. This "dry" air is distributed to the working area through ducts. Humidification is provided by room atomizers located in front of each air duct outlet. Spent air and heat is exhausted automatically through vent louvers.

Amco Unit Dry-Duct Systems operate with evaporative cooling *only*, or with cooling coils, as in the featured installation at Raytric Knitting Mill, Inc.

The Unit Dry-Duct System is but one of the many types of air conditioning systems which Amco manufactures, engineers and installs in textile mills. Amco is in the unique position of being able to give you the widest possible choice between humidification, evaporative cooling (central station, dry-duct, or ductless type) or refrigeration, alone or in combination. Call an Amco engineer. You can rely on him to give you advice on the system best suited to your needs.

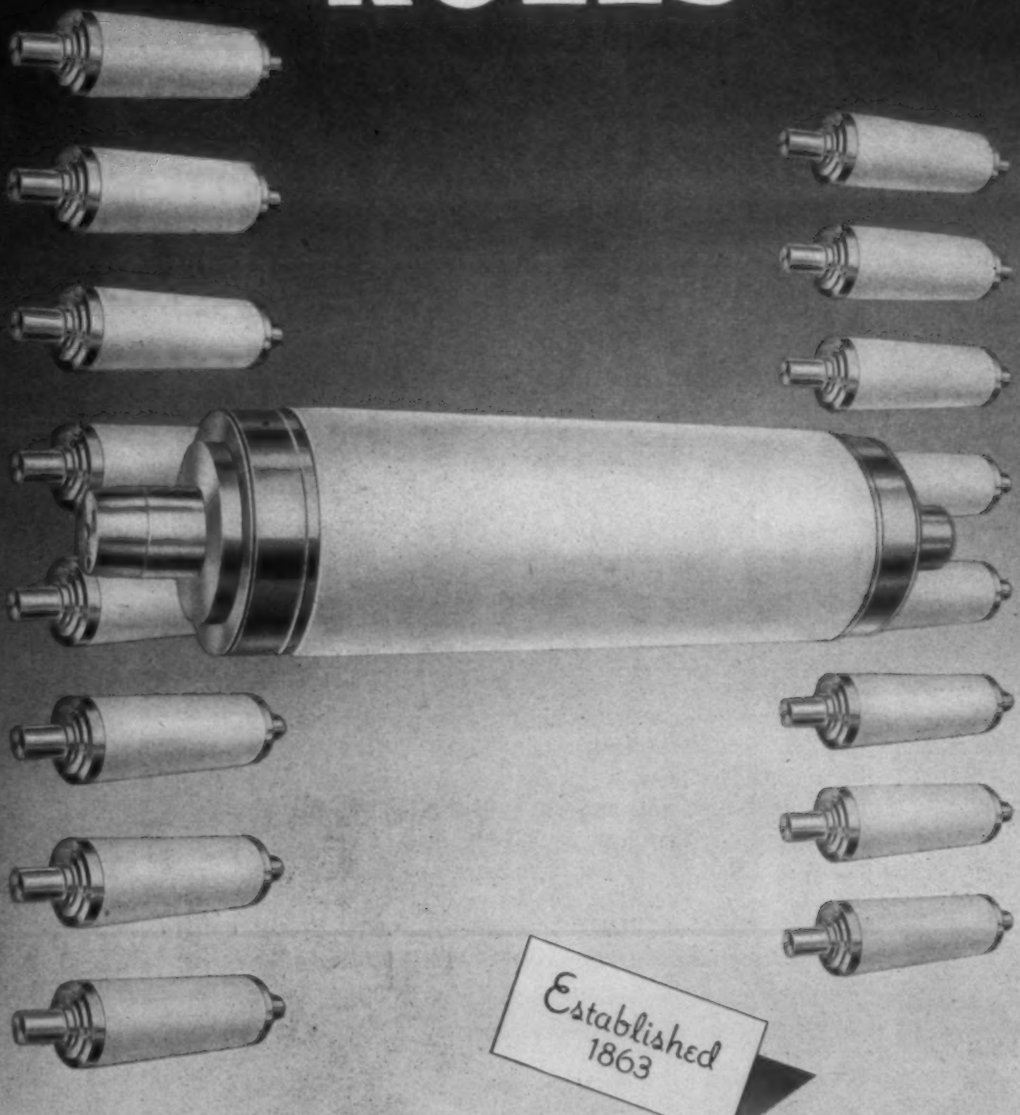
AMCO

AIR CONDITIONING SYSTEMS since 1888

Humidification • Evaporative Cooling (Ductless, Dry-Duct or Central Station) • Refrigeration

AMERICAN MOISTENING COMPANY, PROVIDENCE, R. I. • ATLANTA • BOSTON • CAMDEN • CHARLOTTE • AFFILIATED WITH GRINNELL COMPANY, INC.

"HOLYOKE" CALENDER ROLLS



HOLYOKE MACHINE COMPANY

CALENDER ROLLS for the PAPER and TEXTILE INDUSTRIES
WATER FILTRATION EQUIPMENT
HOLYOKE, MASSACHUSETTS

. . . with National Travelers!

Get maximum spindle speeds in your mill by specifying NATIONAL RING TRAVELERS. There's a National Ring Traveler for every spinning and twisting requirement — available at a moment's notice from our full stocks in Pawtucket and Charlotte: U. S. Standard (American, Hicks, Wilson, Elliptic) and Wentworth (Double Duty or P.B., Gravity, Gravity Express, Bal-Ellipsoid). National Ring Traveler Co. and Sterling Division, Pawtucket, R. I. and Charlotte, N. C.

See us at
Booths 31-32

TEXTILE MACHINERY
ATLANTIC CITY APRIL 26 30 1954
AMERICAN ASSOCIATION
EXHIBITION

NATIONAL
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RING TRAVELERS

F. L. Chase, Jr., Pres. and Treas. • R. V. Borden, Plant Mgr. • L. E. Taylor, So. Mgr.

OLDEST AND LARGEST MANUFACTURER OF RING SPINNING AND TWISTING TRAVELERS IN THE UNITED STATES

NEW versatile Du Pont "CELANTHRENE"* Cerise B for bright pink shades on "ORLON"*, "DACRON"*, nylon and acetate

Here's an amazingly versatile new dye! It's Du Pont "CELANTHRENE" Cerise B—recommended for good light and wet fastness on *all* the hydrophobic fibers.

On type 42 "ORLON" acrylic fiber—Du Pont "CELANTHRENE" Cerise B is particularly valuable on this fiber, where it shows excellent fastness to washing, perspiration, and light.

On nylon—this color builds up well, has good fastness, and yields bluish-pink shades.

On both "DACRON" polyester fiber and acetate—Du Pont "CELANTHRENE" Cerise B is recommended for printing, and shows outstanding strength and freedom from specking.

On "DACRON"—"CELANTHRENE" Cerise B can be applied from benzoic acid, phenolic or other carrier baths, by pressure dyeing without a carrier and by the Thermosol process.

On acetate—the color is level-dyeing with very good buildup properties, and can also be used to produce bright scarlet shades of improved sublimation fastness.

For further information—and for help on any coloring problem—write to
E. I. du Pont de Nemours & Co. (Inc.),
Dyes and Chemicals Division,
Wilmington 98, Delaware.

*REG. U. S. PAT. OFF.

Du Pont Dyes

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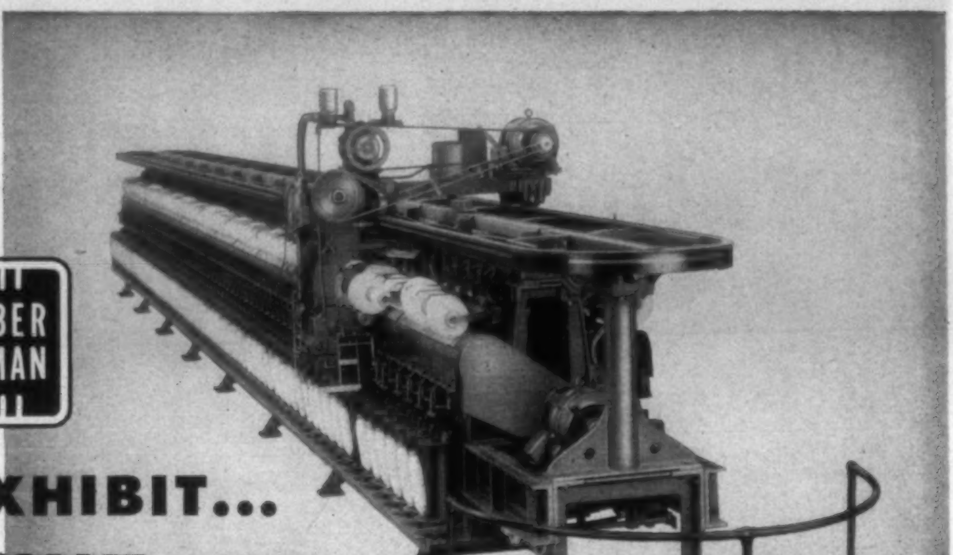
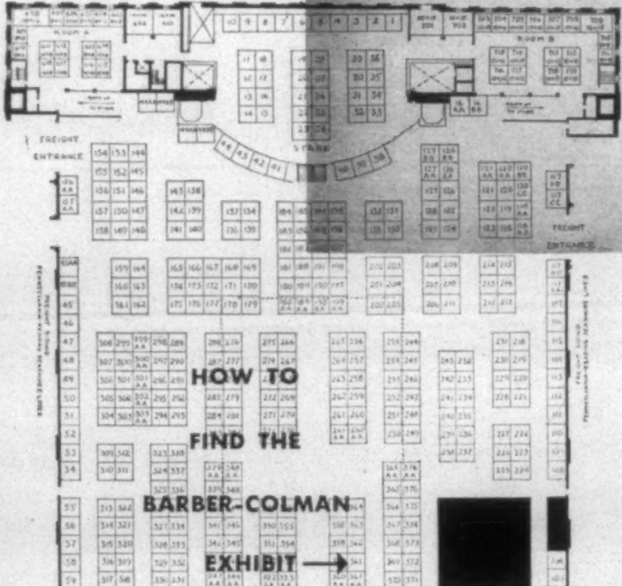
BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

AMERICAN TEXTILE MACHINERY ASSOCIATION EXHIBITION
ATLANTIC CITY APRIL 26-30 1954

BARBER COLMAN



WILL EXHIBIT...


FREIGHT ENTRANCE
STAGE
HOW TO
FIND THE
BARBER-COLMAN
EXHIBIT →
FREIGHT ENTRANCE
ALL SPACES ON MAIN FLOOR AND STAGE 10×10 (100 SQUARE FEET) SIZE OF SPACES ROOMS A & B AS INDICATED
MAIN ENTRANCE

THIS NEW LARGE-PACKAGE AUTOMATIC

SPOOLER

This new Type "D" machine, specially designed to extend the advantages of large-bobbin spinning, will produce packages weighing up to 6 pounds. It is an improved and modernized version of the familiar Type "C" Spooler. *See it in operation . . .*

AT THE **1954** AMERICAN
TEXTILE MACHINERY EXHIBITION

ATLANTIC CITY

APRIL 26-30, 1954

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

BARBER-COLMAN COMPANY

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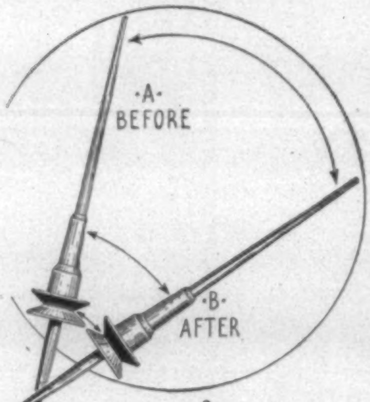
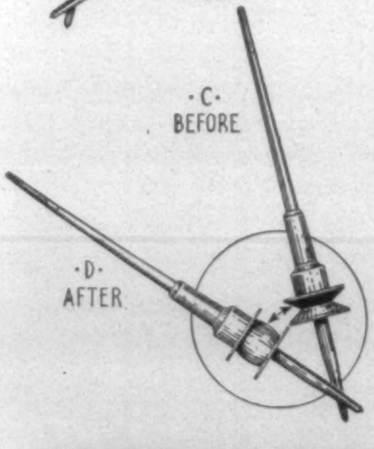
AS GOOD as new!

worn spindles reconditioned by master technicians!

It takes what GOSSETT-MASON has plenty of . . . know-how, equipment and skilled technicians . . . . to repair and recondition spindles. The cost is only a fraction of complete spindle replacement. Give us a call. We will gladly and promptly give you a cost estimate.

look what we do to spindles!





Sketch A. This spindle is badly worn. Note the wornout top, acorn and drive . . . Now look at spindle (B) . . . the same spindle reconditioned by GOSSETT-MASON master technicians.

Sketch B. The worn top has been cut off and a new piece of spindle steel butt-welded onto spindle blade and the top ground to specified size. We also build up the worn top with hard chrome plate and grind the top to size specified. After retopping blade, if necessary we put on a new whorl (made by GOSSETT-MASON).

Sketch C. This is a conventional band driven spindle. Mill specifications called for a tape driven spindle so, GOSSETT-MASON technicians converted at a fraction of the cost of complete spindle replacement.

Sketch D. We removed the band driven whorl and put on a new GOSSETT-MASON tape driven whorl. Then we arranged the band driven spindle base so that it can be used with tape driven spindle. Takes know-how and equipment plus skilled technicians.

PLEASE NOTE: We manufacture all types of new spindles and bases. Write or telephone us for full particulars and a cost estimate.

GOSSETT-MASON
Incorporated

B. W. GOSSETT, *President*
E. C. MASON, *Sales Manager*
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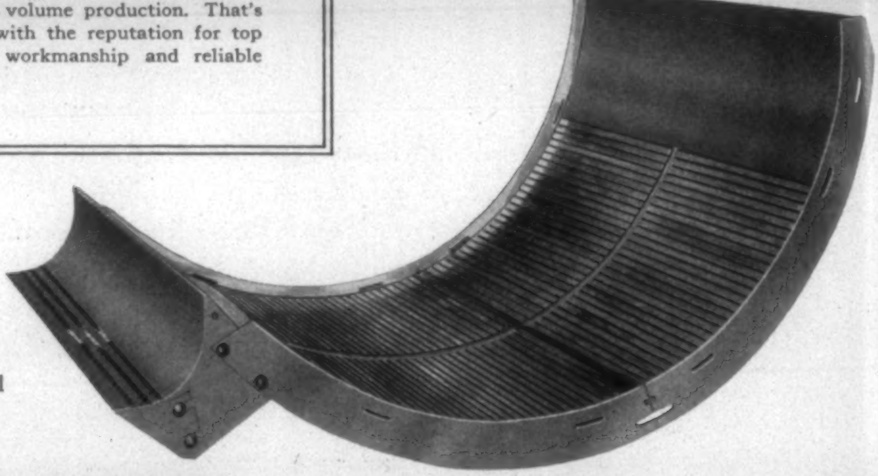
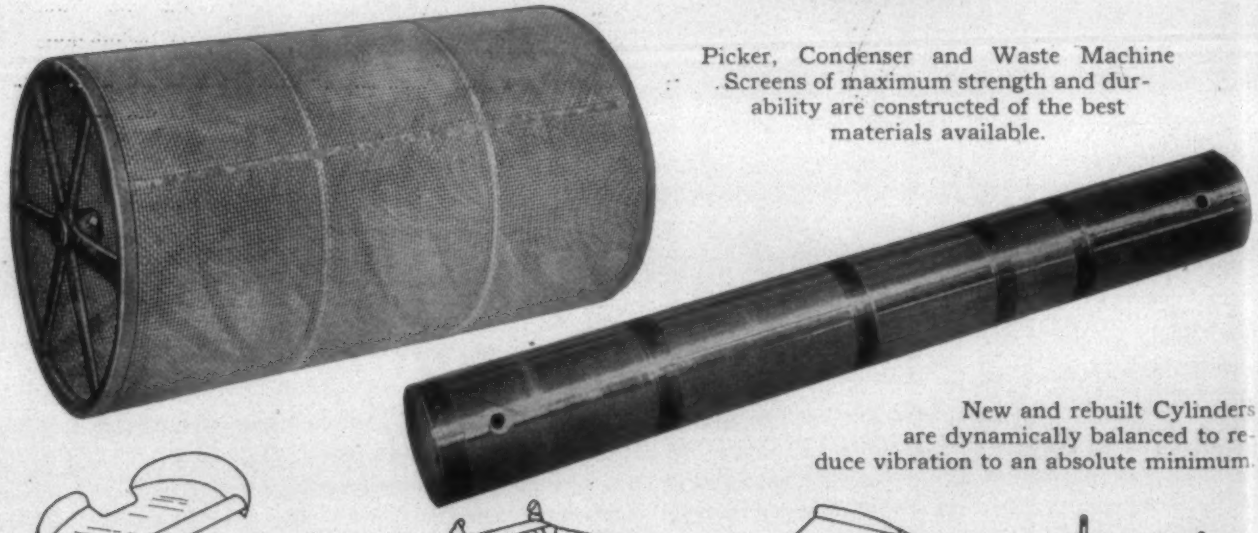
MORE PRODUCTION AT LOWER COSTS with GASTONIA TEXTILE SHEET METAL PARTS

The quality and the profit of your end product starts at the beginning—where preparatory machinery must be geared for efficient, economical volume production. That's our job—a job for specialists with the reputation for top quality products, painstaking workmanship and reliable service.

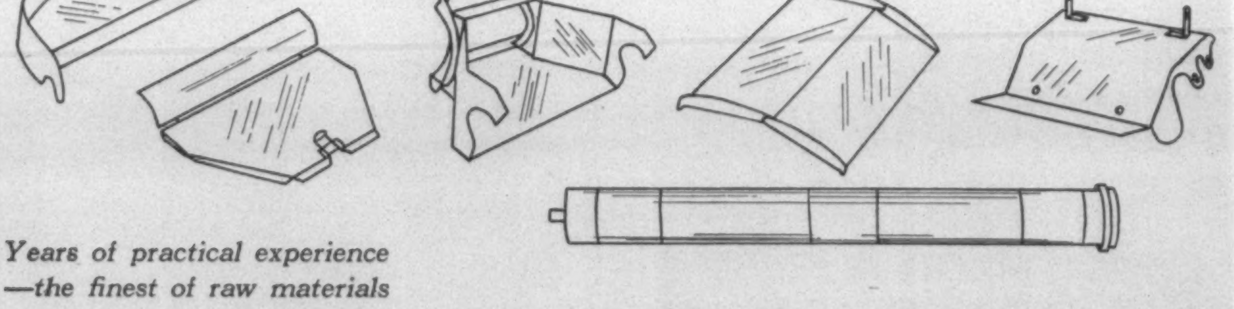


Standard type rib or perforated Card Screens are precision built on special jigs. Every screen is inspected and double checked for accuracy and tolerance.



Picker, Condenser and Waste Machine Screens of maximum strength and durability are constructed of the best materials available.

New and rebuilt Cylinders are dynamically balanced to reduce vibration to an absolute minimum.

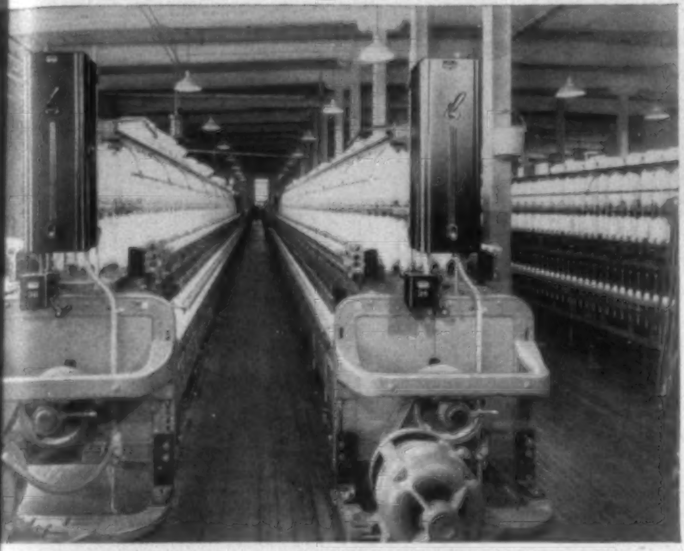


Years of practical experience —the finest of raw materials —and precision machinery in the hands of skilled workmen go into every product.

GASTONIA TEXTILE SHEET METAL WORKS, Inc.
GASTONIA, NORTH CAROLINA
A SHEET METAL WORKS SERVING TEXTILE MILLS

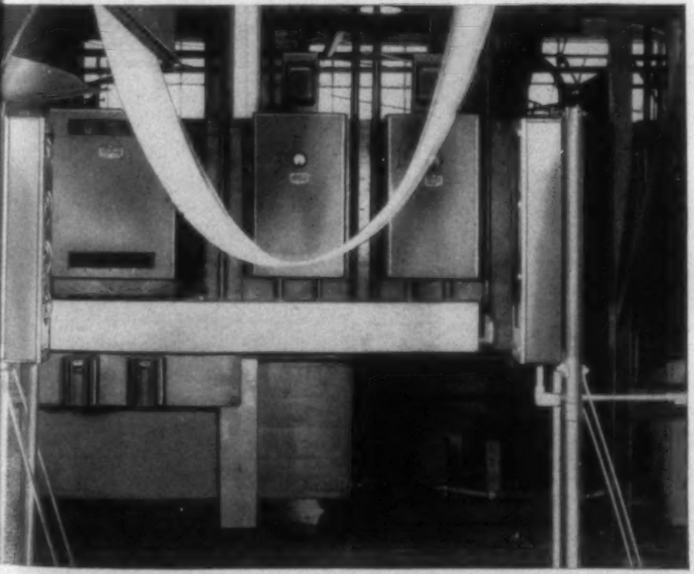
CUTLER-HAMMER

MOTOR CONTROL FOR THE TEXTILE INDUSTRY



at **STATESVILLE.** Cutler-Hammer Combination Starters and Shipper Rod Switches on spinning frames in STATESVILLE DIVISION, The Seminole Mills, Statesville, N. C.

for **WAUMBEC** at Manchester, N. H. Cutler-Hammer Pushbutton Manual Starters on uptwisters and Primary Resistor Type Magnetic Starters on roving frames. Cutler-Hammer control also used on looms and spinning frames in this great mill.



at **MOORESVILLE.** Cutler-Hammer Electronic Dancer Roll Regulator and Range Drive Controller on slack drying range at Mooresville Mills, Mooresville, N. C.

NEW CUTLER-HAMMER LOOM SWITCH

with NEMA 1A Lint-Tight Gasketed Enclosure

Pushbutton operation—an achievement for this type of starter. Stop button can be padlocked.

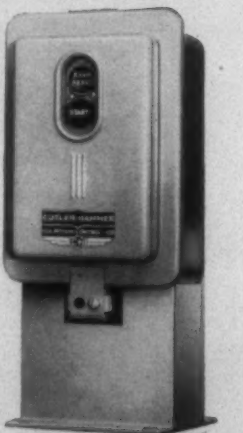
Stronger, smaller, drawn steel case. Unique welded-steel mounting pedestal available to create a *complete* assembly with unparalleled resistance to mechanical shock.

New NEMA 1A lint-tight gasketed enclosure prevents entrance of lint and dust.

Service proven, positive make, quick break operating mechanism built on *steel* framework.

"Out in the open" contacts for quicker inspection and easy renewal *on the job*. Most dependable overload protection—famous Cutler-Hammer eutectic element type—prevents unnecessary shutdowns without sacrifice of *positive* motor protection.

Vibration resistant. Mechanism "floats" in truly effective *live rubber* mounting bushings.



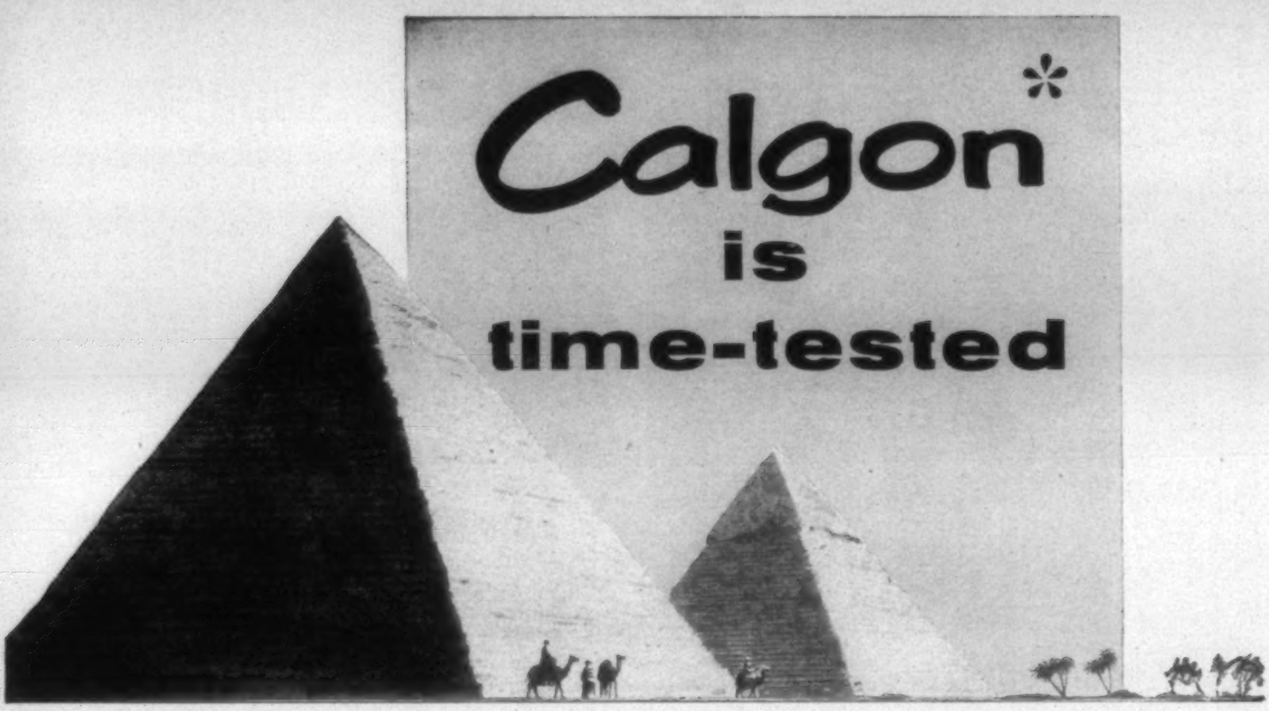
Too important to be left to chance

Men who *know* textile production costs are careful buyers of motor control equipment. They know a single work stoppage caused by faulty control can easily cost more than the entire purchase price of the control. In consequence, they do two things. First, they compare *all* makes of motor control to determine which is most dependable. Second, they specify this make by *name* on every purchase order.

Cutler-Hammer Motor Control is the natural choice of men who know dependability in motor control is too important to be left to chance. They quickly find Cutler-Hammer dependability is not a mere competitive claim but a *fact* that can stand out clearly in a mill's production records to reflect favorably on their own ability and good judgment. They also find that Cutler-Hammer dependability is not an occasional happenstance... that it is the earned advantage of the longest and most intensive specialization in motor control engineering... that it can safeguard *every* control need from the simplest starter to the most complex electronic equipment.

You too will find it pays to insist on Cutler-Hammer Motor Control and refuse all substitutes. An adequate network of Authorized Cutler-Hammer Distributors throughout the textile manufacturing areas insures prompt attention and supply. CUTLER-HAMMER, Inc., 1455 St. Paul Avenue, Milwaukee 1, Wisconsin.

CUTLER-HAMMER
MOTOR CONTROL
C-H



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CALGON softens more water for less money than any other sequestrant available.

CALGON synergizes the detergency of soap. Many sequestrants do not have this property, while others are less effective than Calgon. Calgon also improves the cleaning power of synthetic detergents.

CALGON disperses pigments such as clay, calcium carbonate, titanium oxide and others used in cotton and rayon finishing.

CALGON solubilizes and disperses dyestuff for clearer, brighter dyeing of textiles.

CALGON prevents the contamination of water from iron corrosion products. Using very small quantities of Calgon, this "Threshold Treatment"† is the most economical method for eliminating iron contamination in any textile plant water supply.

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for AIR CONDITIONING

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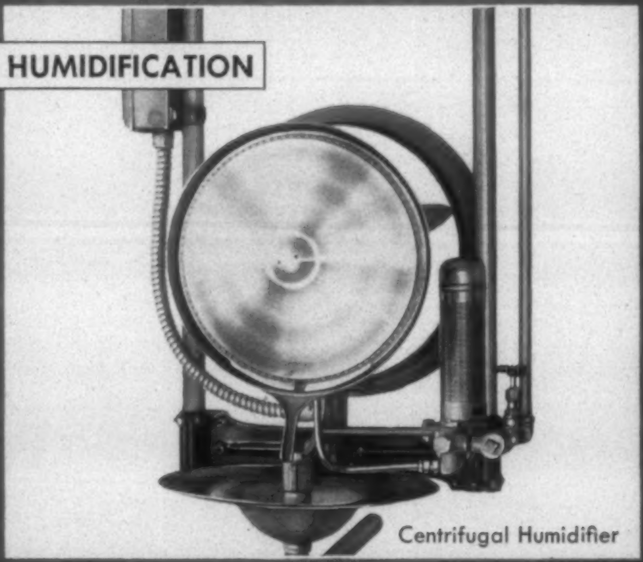
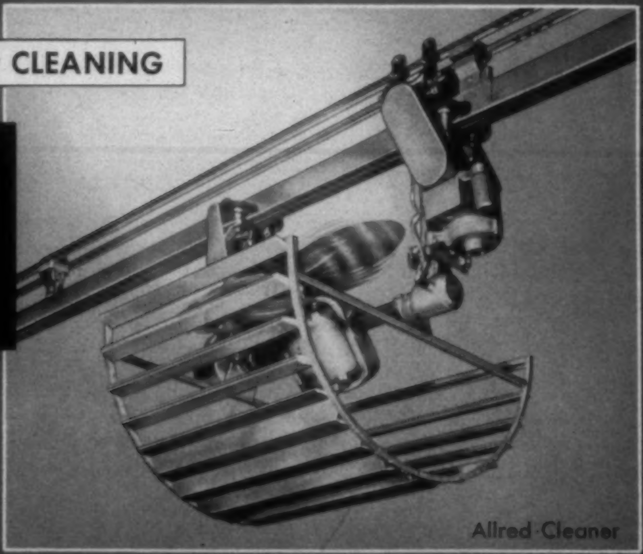


Centrifugal Humidifier

for CLEANING



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AIR CONDITIONING
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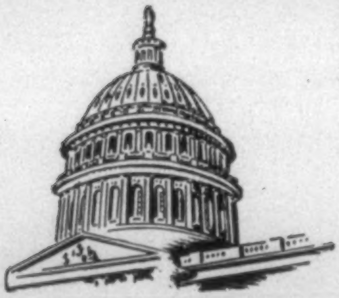
AMERICAN TEXTILE MACHINERY EXHIBITION
Atlantic City, N. J.—
April 26-30, 1954



WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Nothing in the economic situation warrants a slam-bang emergency program at this time, as demanded by the A.D.A., and its union allies, says Mr. Eisenhower. He made clear he views the economic readjustment with confidence, and regards it as a factor in gradual deflation. He believes, however, there is need for early and positive action on the legislative program he has put before Congress.

Gravity of the volume of unemployment and job readjustment is exaggerated and distorted in many public statements, according to the Department of Commerce. Much of the idleness, it is indicated, is due to cessation of arms production in large centers where great numbers of workers have been assembled since the war's start. Other idleness is due to excessive rearmament pay for unskilled and semi-skilled workers.

While a surplus of workers exist in some centers where military production was high, other areas have a shortage of workers. Some of the idleness is due to population dislocations, and unwillingness of families to return to former abodes. The figures are increased also by the ease with which workers, unable to find new jobs similar to those lost, may claim unemployment compensation.

Union leaders are fighting hard to maintain rates paid to unskilled and semi-skilled workers during and since the war. In some instances unskilled pay has reached $10 and $12 a day. Other rates of pay have been built on this base. The vertical unions are feeling the pressure from the top down, as highly-paid skilled workers drop back into less skilled work.

Action on a labor law revision has been suspended by the Senate Labor Committee until the White House reveals its position on state jurisdiction in labor relations. This development can mean delay until the House, under its time schedule, has taken action on a revision bill. The Senate committee is anxious not to report a bill until the House has acted.

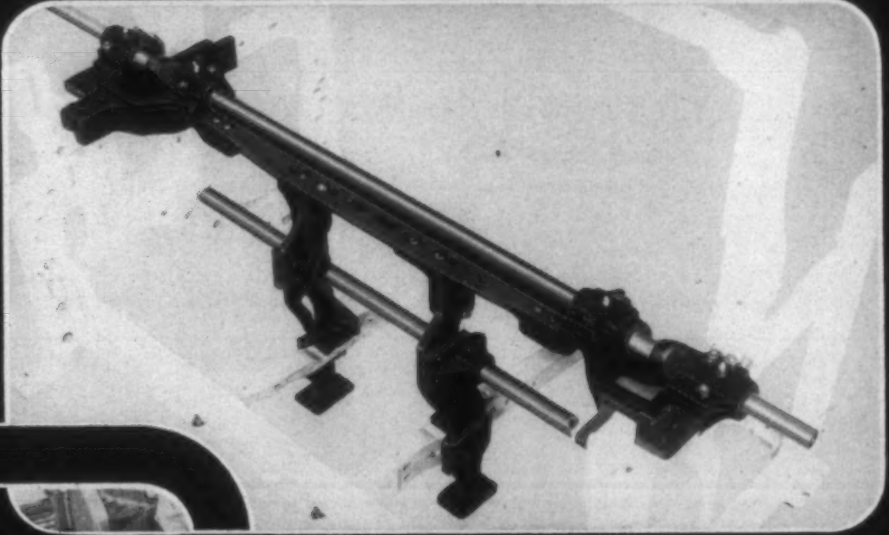
The issue of state jurisdiction in labor relations has been complicated by several Supreme Court decisions nullifying state laws. The Senate Labor Committee contends the decisions have left a "no man's land" in which federal or state jurisdiction is uncertain. Early in this session the White House prepared an amendment covering state jurisdiction, but it was withheld when it met opposition from Labor Secretary Mitchell.

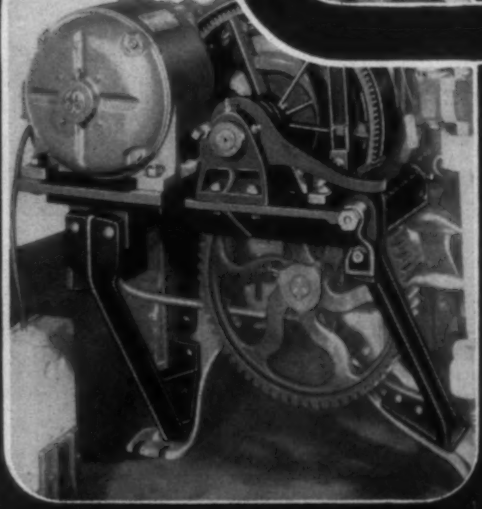
A more stringent anti-secondary boycott provision has been adopted by the House Labor Committee incident to revision of the labor law. The provision is largely in accord with the proposal put forward in the Senate by Senator Schoeppel (R., Kan.), and would lay down rigid restrictions on picketing. It is aimed at feuds between unions over jurisdiction in work.

The House Labor Committee is moving carefully toward a more thorough study of the handling of union welfare and pension funds. In New York State alone it is found that 600 welfare funds of unions have an estimated $20 bil-

Tune-up

THOSE LAZY OLD LOOMS





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GREENVILLE, SOUTH CAROLINA

lion, much of which is available for investment. A surplus of $2.5 billion is found as left-overs from expenditures from payments of about $350 million a year by employers over several years.

Evidence in the possession of the House committee points to vast sums being diverted from welfare purposes into various investments. The extent to which the unions control these investments or in which the investment, or its return, passes into the hands of private individuals, is a major point in the investigation.

The committee has found in some instances that commissions and deductions to union officials, or favored persons, amount to as much as 25 cents in each dollar. In a few cases commissions of 17 1/2 per cent have been paid for the formality of writing an insurance policy to cover a union member eligible for benefits.

John L. Lewis, with a $30 million treasury and a $100 million welfare fund, is reputed to be entering the field of big business on a gigantic scale. While he has denied he is now the owner of the Cincinnati Enquirer and the West Kentucky Coal Co., he did not deny an effort to buy the Hamilton National Bank in Washington, or to be one of Robert Young's backers in seeking control of the New York Central.

The Supreme Court has agreed to hear arguments on a decision from California that employees may revoke at any time the right of a union to represent them. N.L.R.B. has held in the past that representation cannot be revoked during the life of a contract. If the claim is upheld, hundreds of decertification petitions are expected to be filed with N.L.R.B.

The present N.L.R.B. has taken the position it will not intervene in insignificant labor disputes, or in cases where obviously the intent is to delay. The board says it will not allow its processes to be used to circumvent action of a state agency which rightfully asserted jurisdiction, or where the intent is clearly to evade a state law.

Congress is being urged from many quarters not to attempt revision of the labor law until the new N.L.R.B. can more fully test the present provisions. The board is reversing or modifying many decisions of the old board, and assuming a more detached attitude toward disputes. There is feeling the present law has never been given an impartial test.

The issue of outlawing Communist-dominated unions as bargaining agents is expected to come up in both branches before Summer. Employers have asked that the law provide for authoritatively identifying such unions, and that they be denied a legal right to operate unless Communist leaders are removed by rank-and-file members.

Eleven bills to outlaw Communists and their party, and to make Communism a crime in this country, have been taken up by the House Judiciary Committee. A new comprehensive measure covering the matter is being written.

C.I.O. officials have appealed to Congress to liberalize the benefits that are paid under the unemployment compensation system. Spokesmen for industry before the Senate Finance Committee asked for a new provision that would go much further in turning over administration of the jobless benefit program to the states.

A.F.L. unions are aroused over the gloomy forecasts of recession and depression that have been issued by C.I.O. officials. They say the effect is that employers are taking the warnings seriously, and refusing to concede higher wage grants, or to make more favorable concessions in new contracts.

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Vol. 80 April 1954 No. 4

textile bulletin

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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Subscription rates are: one year payable in advance, $1.50; three years payable in advance, $3.00; one year, Canada, $3.00; one year, other countries in Postal Union, $5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

Spotlight On Industry Migration

Granting of state corporate tax relief for the textile industry to prevent further migration from Pennsylvania is one of the principal recommendations offered in the final report of a textile study committee appointed nearly two years ago by the Keystone State's governor, John S. Fine. Discussing corporate taxes, the committee said that it "strongly recommends, in view of the facts, that no additional corporate taxes, direct or indirect, be levied in the State of Pennsylvania and that some relief be given to the already existing high corporate taxes. The committee further recommends that the commonwealth study the corporate tax structure, giving special consideration to alleviating the situation created by the capital stock tax and corporate net income tax as they affect the location of new industry, the establishing of new industrial enterprises and expansion of old established industry in the state. It is the opinion of this committee that this relatively high corporate tax is a decided disadvantage, regardless of whether the total tax (including state tax, local tax and other tax) in any particular case is lower or higher in Pennsylvania than in other competing areas. Pennsylvania is unique in that the study . . . was requested before any substantial exodus from Pennsylvania, industry-wide, had gotten under way."

Another of the study group's recommendations was that public utilities providing power to textile plants "recognize their responsibilities" to make Pennsylvania attractive to the industry. It also proposes additional funds for vocational training in textile schools. Seven textile plants have moved to the South from Pennsylvania, the committee stated. But, according to the state commerce department, "not one of them gave high taxes or high power costs" as reasons for the transfer. In one instance freedom from municipal taxes for five years was an inducement, but here plant officials said that take-home pay in the South was either the same or a penny or two more an hour than in the North.

The manpower advantage of the Southeast is the main reason for migration of the textile industry from New England to this part of the country, according to another recent study, by Dr. Robert W. Paterson of the University of South Carolina Bureau of Economic Research. Writing on "Why Industry Moves to the Southland" in the April issue of the university's *Business and Economic Review,* Dr. Paterson predicts that "no matter how much emotional attachment New Englanders have for the textile industry, the drift of plants from the region will continue."

While abundant manpower is an advantage which will diminish with the years, present employment rates indicate that the South's labor situation will not become critical within the near future. Availability of raw materials and an expanding market for textiles are further advantages to the Southeast, but they are not decisive factors. The region's greatest attraction for the textile industry is its reservoir of relatively unskilled workers, according to Dr. Paterson.

New England cotton textile manufacturers are competing for labor with industries in the same region which pay higher wages, and they cannot increase wages without pricing their product out of the market, said the economist. He predicts the Southeast will face the same problem with cotton textile mills making an exodus in the future.

Even while the question of North and/or South is being hashed out for the umpteenth time, claims and counter-claims in respect to who has the "mostest" textile manufacturing are being proffered by various Southern states.

From South Carolina: We exceeded North Carolina in the number of cotton system spinning spindles in place for the first time in November 1953; this data did not include winding and twisting spindles. The South Carolina lead was even greater as of Feb. 27, 1954, when the Bureau of the Census records showed South Carolina as having 6,222,000 spinning spindles in place as compared with North Carolina's 6,133,000.

From North Carolina: Those figures are for cotton system spindles only, which are used for cotton and, in some cases, spun rayon, and do not reflect our remarkable advances in synthetic fiber textile manufacturing in recent years. Besides, we are the nation's leader in hosiery manufacturing, and this industry is insignificant in South Carolina.

From Georgia: According to Department of Commerce figures, we led all Southeastern states in selling textile products to federal agencies in 1953, with contracts totalling nearly 20½ million dollars.

From South Carolina: There is one thing for sure—the big movement of textiles is to the Carolinas. The two states now have more than 50 per cent of the entire industry. We are the biggest print cloth state, and we are also the biggest spinning, weaving and finishing state. North Carolina leads in sales yarn production, in cotton consumed, in knitting and in number of employed. But watch us, and particularly notice our growth in woolen and worsted manufacturing.

To which we might add that it's all a sign of regional progress.

TEXTILE INDUSTRY SCHEDULE

— 1954 —

Apr. 22-24 (Th-Sa)—Annual convention, **AMERICAN COTTON MFRS. INSTITUTE**, Jung Hotel, New Orleans, La.

Apr. 24 (Sa)—**NORTHERN NORTH CAROLINA-VIRGINIA DIV., S.T.A.**, White Oak Y.M.C.A., Greensboro, N. C.

Apr. 24 (Sa)—**SOUTH CENTRAL SEC., A.A.T.C.C.**, Hotel Patten, Chattanooga, Tenn.

*Apr. 24-May 3 (Sa-M)—**LYONS INTERNATIONAL FAIR**, Lyons, France.

Apr. 26 (M)—General committee meeting, **TEXTILE ENGINEERING DIV., A.S.M.E.**, Atlantic City (N. J.) Auditorium.

Apr. 26-28 (M-W)—Manufacturing conference, **A.M.A.**, Hotel Statler, Cleveland, Ohio.

Apr. 26-30 (M-F)—**AMERICAN TEXTILE MACHINERY EXHIBITION** (sponsored by American Textile Machinery Assn.), Atlantic City (N. J.) Auditorium.

*Apr. 26-30 (M-F)—**INDUSTRIAL HEALTH CONFERENCE**, Hotel Sherman, Chicago, Ill.

Apr. 28 (W)—**BRAND NAMES DAY** (sponsored by Brand Names Foundation Inc.)

Apr. 28 (W)—Alumni meeting, **LOWELL TECHNOLOGICAL INSTITUTE**, Haddon Hall, Atlantic City, N. J.

*Apr. 29-30 (Th-F)—**INDUSTRIAL ENGINEERING CONFERENCE** (sponsored by Society for Advancement of Management and A.S.M.E.), Hotel Statler, New York City.

Apr. 30 (F)—Annual meeting, **ASSN. OF NARROW FABRIC MFRS.**, Hotel Warwick, Philadelphia, Pa.

*May 3-14 (M-F)—**BRITISH INDUSTRIES FAIR**, Castle Bromwich, Birmingham, England.

May 4-6 (Tu-Th)—**NORTH CAROLINA STATEWIDE INDUSTRIAL SAFETY CONFERENCE**, Hotel Sir Walter, Raleigh.

May 5-6 (W-Th)—Spring meeting, **THE FIBER SOCIETY** (Institute of Textile Technology as host), Monticello Hotel and Thomas Jefferson Inn, Charlottesville, Va.

*May 5-7 (W-F)—**AMERICAN SOCIETY OF TRAINING DIRECTORS**, Schroeder Hotel, Milwaukee, Wis.

*May 6 (Th)—Annual meeting, **NATIONAL ASSN. OF WOOL MFRS.**, Waldorf-Astoria Hotel, New York City.

*May 7-8 (F-Sa)—Semi-annual convention, **NATIONAL ASSN. OF WOOLEN AND WORSTED OVERSEERS**, Hotel Manger, Boston, Mass.

May 8 (Sa)—**PIEDMONT DIV., S.T.A.**, Catawba Country Club, Hickory, N. C.

May 8 (Sa)—Carding and spinning meeting, **T.O.E.G.**, A. French Textile School, Georgia Institute of Technology, Atlanta.

*May 8-18 (Sa-Tu)—**SWISS INDUSTRIES FAIR**, Basel, Switzerland.

May 10-15 (M-Sa)—**NATIONAL COTTON WEEK** (sponsored by National Cotton Council of America).

May 13-15 (Th-Sa)—Annual outing, **CAROLINA YARN ASSN.**, The Carolina, Pinehurst, N. C.

May 14-15 (F-Sa)—Outing, **SOUTHEASTERN SEC., A.A.T.C.C.**, Radium Springs, Ga.

*May 17-20 (M-Th)—**BASIC MATERIALS EXPOSITION**, International Amphitheatre, Chicago, Ill.

May 20-21 (Th-F)—Annual outing, **CHATTANOOGA YARN ASSN.**, Chattanooga (Tenn.) Golf and Country Club.

*May 21 (F)—Spring meeting, **TEXTILE DIV., AMERICAN SOCIETY OF MECHANICAL ENGINEERS**, Hotel Sheraton, Boston, Mass.

May 24-26 (M-W)—Insurance conference, **A.M.A.**, Hotel Statler, New York City.

May 27-29 (Th-Sa)—Annual convention, **SOUTH CAROLINA TEXTILE MFRS. ASSN.**, The Cloister, Sea Island, Ga.

May 31-June 3 (M-Th)—**INTERNATIONAL CONGRESS OF MAN-MADE FIBERS**, Paris, France.

June 4-5 (F-Sa)—Outing, **SOUTH CENTRAL SEC., A.A.T.C.C.**, Chattanooga (Tenn.) Golf and Country Club.

*June 7-10 (M-Th)—**SOCIETY OF THE PLASTICS INDUSTRY**, Municipal Auditorium, Cleveland, Ohio.

*June 8-11 (Tu-F)—Annual conference, **THE TEXTILE INSTITUTE** (held jointly with Society of Dyers and Colourists), Grand Hotel, Scarborough, England.

June 10-12 (Th-Sa)—Annual convention, **S.T.A.**, Ocean Forest Hotel, Myrtle Beach, S. C.

June 11 (F)—Reunion and outing, **PHILADELPHIA TEXTILE INSTITUTE ALUMNI ASSN.**, Manufacturers Golf and Country Club, Oreland, Pa.

June 11-12 (F-Sa)—Summer outing, **PIEDMONT SEC., A.A.T.C.C.**, Mayview Manor, Blowing Rock, N. C.

June 13-18 (Su-F)—Annual meeting, **AMERICAN SOCIETY FOR TESTING MATERIALS** (with concurrent Exhibit of Testing and Scientific Apparatus), Sherman and Morrison Hotels, Chicago, Ill.

June 21-23 (M-W)—General management conference, **AMERICAN MANAGEMENT ASSN.**, Hotel Statler, New York City.

Sept. 11 (Sa)—Annual meeting, **PIEDMONT SEC., A.A.T.C.C.**, Hotel Barringer, Charlotte, N. C.

Sept. 13-14 (M-Tu)—Fall meeting, **THE FIBER SOCIETY** (Textile Technical Federation of Canada and Canadian Assn. of Textile Colourists and Chemists as hosts), McGill University, Montreal, Que., Canada.

Sept. 15-18 (W-Sa)—National convention, **A.A.T.C.C.**, Atlanta (Ga.) Biltmore Hotel.

Sept. 23-24 (Th-F)—Annual meeting, **COMBED YARN SPINNERS ASSN.**, Grove Park Inn, Asheville, N. C.

Sept. 28-30 (Tu-Th)—**INDUSTRIAL PACKAGING AND MATERIALS HANDLING EXPOSITION**: concurrent short course Sept. 27-30 and competition Sept. 28-30 (sponsored by Society of Industrial Packaging and Materials Handling Engineers), Chicago (Ill.) Coliseum.

Oct. 4-8 (M-F)—**SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

Oct. 12-15 (Tu-F)—**NATIONAL CHEMICAL EXPOSITION** (sponsored by American Chemical Society), Chicago (Ill.) Coliseum.

Oct. 14-15 (Th-F)—Convention, **THE QUARTERMASTER ASSN.**, Sheraton-Plaza Hotel, Boston, Mass.

Oct. 14-15 (Th-F)—Annual meeting, **NORTH CAROLINA TEXTILE MFRS. ASSN.**, The Carolina, Pinehurst, N. C.

*Oct. 23 (Sa)—Slashing and weaving meeting, **TEXTILE OPERATING EXECUTIVES OF GEORGIA**, A. French Textile School, Georgia Institute of Technology, Atlanta.

*Nov. 15-17 (M-W)—Fifth **NATIONAL CONFERENCE ON STANDARDS** (sponsored by American Standards Assn.), Hotel Roosevelt, New York City.

Dec. 4 (Sa)—**SOUTH CENTRAL SEC., A.A.T.C.C.**, Hotel Patten, Chattanooga, Tenn.

Dec. 11 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Atlanta Biltmore Hotel, Atlanta, Ga.

— 1955 —

Jan. 24-27 (M-Th)—**PLANT MAINTENANCE & ENGINEERING SHOW**, International Amphitheatre, and **CONFERENCE**, Conrad Hilton Hotel, Chicago, Ill.

Jan. 31-Feb. 1 (M-Tu)—Annual meeting, **NATIONAL COTTON COUNCIL OF AMERICA**, Hotel Shamrock, Houston, Tex.

†Jan. 27-29 (Th-Sa)—Annual conference, **TEXTILE DIV., AMERICAN SOCIETY FOR QUALITY CONTROL**, Clemson (S. C.) College.

Mar. 31-Apr. 2 (Th-Sa)—Annual meeting, **AMERICAN COTTON MFRS. INSTITUTE**, Palm Beach (Fla.) Biltmore Hotel.

June 16-18 (Th-Sa)—Annual convention, **SOUTHERN TEXTILE ASSN.**, Mayview Manor and Green Park Hotel, Blowing Rock, N. C.

*June 25-July 10 (Sa-Su)—**INTERNATIONAL TEXTILE EXHIBITION**, Brussels, Belgium.

Sept. 21-23 (W-F)—National convention, **A.A.T.C.C.**, Chalfonte-Haddon Hall, Atlantic City, N. J.

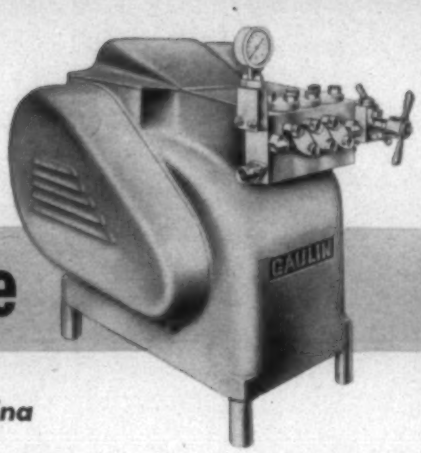
— 1956 —

Sept. 10-12 (M-W)—National convention, **AMERICAN ASSN. OF TEXTILE CHEMISTS AND COLORISTS**, Waldorf-Astoria Hotel, New York City.

Listed for the first time this month. ***‡Tentative listing.*** ***†Changed or corrected from previous issue.***

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday; (Su) Sunday

The Truth about
Gaulin Homogenized Size



As Revealed by 33 North and South Carolina Mills in an STA Questionnaire

We've been telling you how a Gaulin Homogenizer can help you make a *better yarn* at *lower cost* for some years now. We've repeated what hundreds of operators have reported to us. But don't take our word for it alone. Here are the facts — the personal experiences of 33 Mills as revealed in an STA questionnaire. Draw your own conclusions.

Q. *Is your entire production on homogenized size or partly on homogenized size?*

A. 90% of mills with homogenizers have their entire production on homogenized size.

Q. *What type starch is used?*

A. 78.7% of mills reported used pearl starch
7.1% used potato starch
7.1% used thin boiling and pearl
7.1% used thin boiling

Q. *Do you notice an improvement in the uniformity of added size on homogenized warp?*

A. 86.4% report an improvement
13.6% report no change

Q. *Is there a decrease in hard size through the use of homogenizers?*

A. 78.1% report decrease of hard size
21.9% report no change

Q. *Is there any noticeable difference in size in the yarn with homogenized size?*

A. 56.8% report improvement in penetration
43.2% noticed no difference

Q. *Is there improvement in the quality of the warp yarn?*

A. 50% indicated improvement
16.6% very little improvement
33.4% no change

Q. *How long do you store your homogenized size before its usefulness is gone?*

A. 8.3% — 8 hrs.
25% — 16 hrs.
41.6% — 48 hrs.
8.3% varies
16.8% will not hold size
One mill reports that they have checked and held size 56 hrs. and still were able to use the size.

Q. *Is the viscosity of homogenized size more uniform than regular size cooked in the conventional manner?*

A. 65% report more uniformity
36% report no change

Q. *Do you consider your homogenizer a worthwhile investment?*

A. All mills report that they consider it a worthwhile investment.

Q. *How long do you consider it takes to pay for this machine?*

A. 23.1% agree to 6 months
23.1% agree to 12 months
38.4% agree to 18 months
7.7% agree to 24 months
7.7% agree to 36 months

Q. *Are the savings in starch only or are there other savings?*

A. All mills agree that starch is the basis for the largest amount of savings. Other savings are listed as preparation time, 2nds due to hard size, steam due to short cooking cycle, week-end dunking of size.

For more information on Gaulin guaranteed performance, write today.

SYNTHETICS — WORSTEDS

Mills are now preparing more uniform sizes for Synthetics and Worsteds, too, with a Gaulin Homogenizer. Sizes are made finer, faster and at substantially lower costs according to field reports.

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MANUFACTURING COMPANY, INC.
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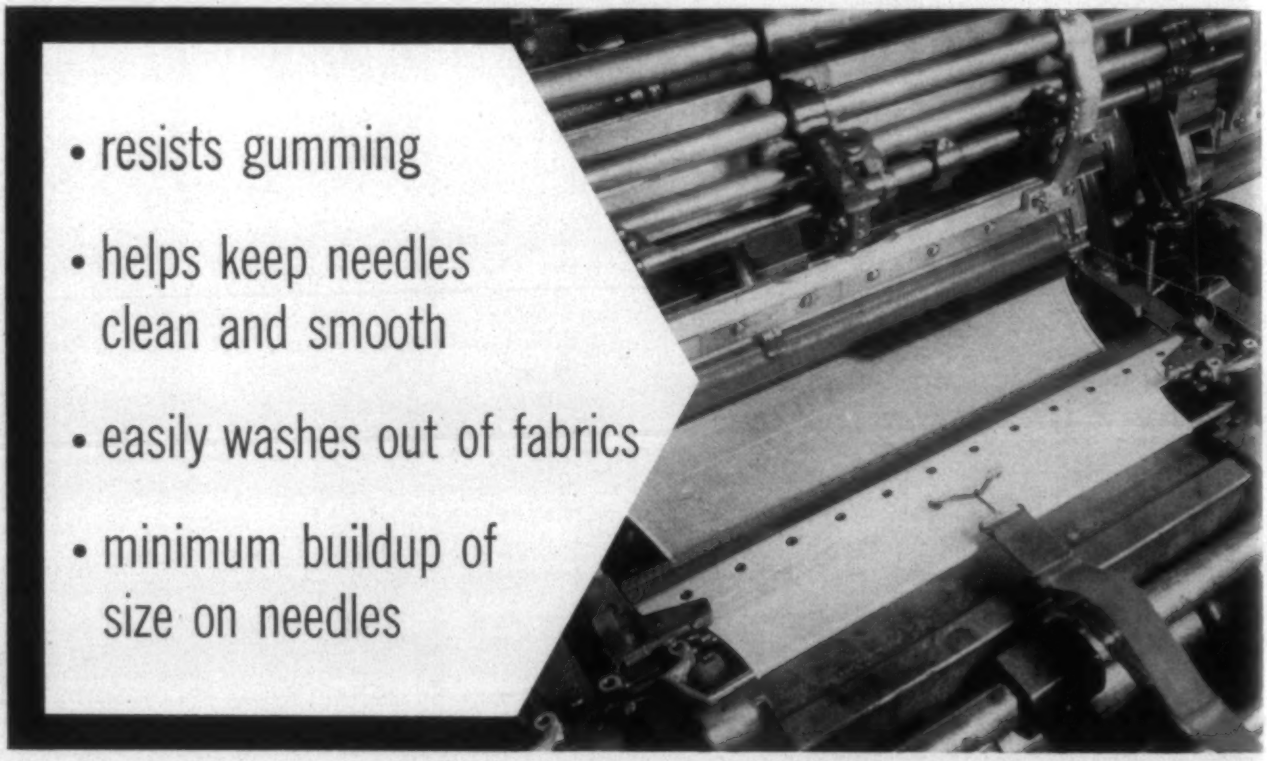
World's Largest Manufacturer of Homogenizers, Triplex Stainless-Steel High Pressure Pumps, and Colloid Mills
Southern Representative: W. A. Hewitt, P. O. Box 961, Greenville, S. C.

Announcing
GULFTEX OIL A
-the ideal needle oil



- resists gumming
- helps keep needles clean and smooth
- easily washes out of fabrics
- minimum buildup of size on needles

Out of Gulf Research Laboratories has come another outstanding textile lubricant—Gulftex Oil A, the ideal needle oil.

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textile bulletin

VOL. 80 APRIL 1954 NO. 4

The *Pee-pul* Of South Carolina Speak Out On Unionization

The Columbia Broadcasting System recently devoted two chapers of its Sunday afternoon network program, THE WORLD TODAY, in presenting a factual tape-recorded report from two different sections of the country. The first of these was a so-called "depressed area" in New England, where it is pretty well agreed that industry is "union oriented," with most of the hourly-paid workers being members of various labor unions. The second report came from Oconee County, S. C., which was presented as an area where business was booming and where sentiment in favor of union organization seems to be less than one per cent of those employed. The full script of the broadcast covering Oconee County is herewith presented.

First Voice Heard on Program, a Native:

I don't think we need the union in these plants in Oconee County or even in the South. I don't see where they could possibly do us any good or be any benefit to us.

C.B.S. Commentator, Edward P. Morgan:

On Jan. 17, *The World Today* told the story of Lowell, Mass., a so-called "depressed area" from which many factories have fled. This reflected a kind of economic sickness afflicting all New England, which has lost some 135-odd textile mills since World War II.

New England's loss has been the South's gain, particularly the Carolinas and Georgia. In the last eight years, more than 1,000 manufacturing plants of various kinds have sprung up in South Carolina alone. What happens to a quiet Blue Ridge Mountain community which suddenly awakens to the hum of mass production? It is a complicated, un-honeysuckled story of economic dynamics, but, above all, it is a story of people. To report it, *The World Today* moves with Correspondent Av Westin and his recording equipment into the Palmetto State, as South Carolina is called.

Westin pauses in Washington first for a militant statement from South Carolina's senior senator, Burnet R. Maybank.

The Eisenhower Administration proposes to bring some relief to the depressed areas by allowing them 20 per cent of defense contract work if they meet a low bid. Senator Maybank has introduced legislation to block such action.

Senator Burnet Maybank:

The purpose behind my bill is to stop using money appropriated for the Armed Services for relief purposes. That is being done by contracts being cancelled in various parts of the United States and transferred to other parts of the United States without the low bidder getting the contract because of unemployment in certain areas. I am from South Carolina and I know of no contract that has been taken out of my state. A lot of contracts were taken from Arizona, New Mexico, Pennsylvania, New Jersey, which I put in the Record last year, and it is no Southern issue whatsoever. It is an American issue—the American way, for the low bidder to receive the contract. And if New England is the low bidder, they should get it.

C.B.S. Commentator:

Reporter Westin then flew to Columbia, the capital of South Carolina. In perhaps a suaver accent than the unique Scotch bur-r-r of Senator Maybank, but with equal indignation, Gov. James Byrnes speaks his mind.

Gov. James F. Byrnes:

The Administration has announced the policy not to award contracts to the lowest bidder but to award them to some manufacturer in a labor surplus area who is willing to meet the lowest bid offered. That is a continuation of a policy authorized by the last Democratic Congress and practiced by the last Democratic Administration. It was wrong then. It is wrong now. Such a policy is indefensible. It assures the manufacturer that, regardless of his waste and inefficiency, the government will award him a contract instead of awarding it to the lowest bidder. It will discourage bidding. It might force the efficient manufacturer to dismiss employees. The principle of such a policy is wrong regardless of what area may have surplus labor and regardless of what administration proposes it.

Arthur Brown, Mayor of Walhalla:

I am Arthur Brown, the mayor of Walhalla, S. C. It is a small town of about 4,000 people in the extreme northwestern part of South Carolina, between Charlotte, N. C., and Atlanta, Ga. Our main support is, of course, from farmers, connected with our manufacturing plants here. Our manufacturing plants are largely staffed by, that is, the labor is furnished by mostly farmers who drive in here, these part time farmers.

Farmer-Factory Worker:

I get up in the morning about 7 o'clock and work on the farm 'till about 2 or 2:30. Then I quit, take a bath, go to the mill and work 'till 12 that night.

C.B.S. Commentator:

That part time farmer, Martin A. Fricks, a short, busy man in blue overalls, lives in Oconee County.

In the heart of the Blue Ridge, Oconee County is the home of Sugar Creek, the Tugaloo River, Issaquena Falls and of native labor, which, as the Chamber of Commerce brochures readily emphasize, believes in an honest day's work for an honest day's pay.

But our Oconee County and its two principal towns, Seneca and Walhalla, spelled with a "W," incidentally—are these places really building up into an industrial center? Mayor Brown has his answer:

Mayor Brown:

Just yesterday afternoon I was talking with a man whose home was in Lowell, Mass., who just came down here and established one mill in this county, and he told me he was the happiest he had ever been in his life. Those people have had two plants down here in South Carolina, they have 18 plants all told, and they expect, eventually, to move every one of them South.

C.B.S. Commentator:

Yet, New England has complained that Southern communities hungering for outside capital often raise unscrupulous lures of special financial arrangements—cheap labor and the like. One of Walhalla's most successful merchants, a woman, named Minnie Barkin, takes exception.

Minnie Barkin:

There's no luring being done. We are simply making it attractive as anybody would that wanted to build up a community. We are offering no special inducements. We are just telling them what our natural resources are.

C.B.S. Commentator:

The big exodus from the North started with cotton textiles. Now woolens are following. The huge American Woolen Co. has just decided to dispose of 11 Northern mills. The head of the South Carolina Research, Planning and Development Board, L. W. Bishop, suggests why his state may get woolen mills, too.

L. W. Bishop:

Well, here's why. Wool can be brought into the port of Charleston. They came down here, for another reason, because the markets are here. That is, the manufacturers are here for their products. But I would say that one of the biggest factors, causes, rather, for their coming down was an engineering one. For example, they have to use a tremendous amount of hot, boiling water. The water is warmer here, even in the Winter than it is 'way up in the far part of the North in the Summer. So that's a tremendous economic saving for them.

C.B.S. Commentator:

Many New England factories are run down, out-dated. Rather than repair or modernize, many companies figure it's cheaper to build a brand-new plant in the South, considering land values and minimum taxes, for instance. But, are these give aways? Are they a calculated exaggeration of Southern hospitality? One of Oconee County's industrial planners, John W. Duncan, protests:

John W. Duncan:

Now, take two plants that were built here recently. One of them was on a piece of land that was, well, I don't know how many acres, around 100 acres, that cost them $10,000. When large plants come into our area, they build their own—they buy their own land, they build their own. We could give land to one, which is just a gesture, as far as that is concerned, a friendly gesture. We only have, I would say, a five-year tax county exemption; but after that, they pay taxes. We've got several of our industries right now, or within the next year or two, that will be paying taxes, real taxes, into our country. We think that's right to get them started. We know that some of them have a hard pull at first. I know of a couple of them right now that are not operating here as large as we expected them to be.

C.B.S. Commentator:

One of the bluntest comments on the South and Oconee County's new prosperity comes from a product of the University of South Carolina, Organizer Leon Dennis of the C.I.O. Textile Workers Union.

Leon Dennis (C.I.O.):

The reason these mills are coming into the South is because of the abundance of cheap labor down here. They can get labor anywhere from 75 cents on up, and it doesn't go up too far. These mills are moving down to the South from the North to get away from organized labor in the North. As long as they have organized labor within their plant, they cannot pay 75 cents an hour.

L. W. Bishop:

We've got no cheap labor for sale! We have highly productive, co-operative labor to sell and that's what my job is for. I'm not hunting plants. I'm selling jobs, and if they think they are coming down here to find cheap labor or to proselyte on our labor and working people, they are hitting the wrong sort of a country and I don't hesitate to tell them so emphatically.

C.B.S. Commentator:

That was State Planner Bishop, who has some things to say, too, about what he might call intangible attractions to business.

L. W. Bishop:

Well, I think the biggest thing that we have to offer in South Carolina is basically sound-thinking people. Our people were 99.6 per cent native born. Now we don't boast of that—that we are any different from the people in New England—because we are not. You see the same French, German, Irish, Italian and people here—the Jewish people have been here, for one and two hundred years. But I say to you when I say 99.6 per cent native born, I am alluding to the fact that they have one mind and one type of thinking; and if you like it, and we do, and industry, apparently, likes it, then you have something tangible on which to build. That is conservatism.

C.B.S. Commentator:

An impressive number of the frugal, hard-working Blue Ridge Mountain people readily volunteer that, as far as money is concerned, they have never had it so good as now, with factory jobs fattening their farm incomes. Still, underpaid? Reporter Westin asks Ebray E. Patterson, a hand at the Clemson plant of Utica-Mohawk Mills.

Ebray Patterson, Worker at Utica-Mohawk:

Well, I don't know too much about the average wages. But I'll say a man in the South in the mill can make very easily $60 a week as based on 40 hours; that a man making $60 a week with a family of four children can very easily save 20 per cent of his wages.

C.B.S. Commentator:

But there is a real differential in dollars and cents between the wages paid in Northern and in Southern mills. The actual figure is disputed. One estimate ranges between 25 cents and 30 cents an hour more in the Northern pay envelope than in the Southern. Another calculation is something like seven cents an hour in actual pay, plus another nine cents in so-called "fringe" benefits. But many Southerners argue that they have fringe benefits of their own in lower living costs. This is the way Oconee County Planner John W. Duncan adds them up.

John W. Duncan:

Better living conditions are the difference. Let me give you this illustration. In New York state I just heard recently, in New York City, where a man right here in this county was telling me his daughter rents an apartment having one large sitting room, a kitchenette, now that's not a kitchen, a kitchenette, a small bedroom—and they pay $125 a month. Now you are going to be surprised at this: I have a nice little cottage, large grounds; I have a large kitchen, not a kitchenette, a sitting room, two good-sized bedrooms and a bath. I pay $35 a month.

C.B.S. Commentator:

The portly, white-haired postmaster of Walhalla, H. M. DuPre, paints a picture of prosperity for the whole area.

Postmaster H. M. DuPre of Walhalla:

Of course, in this office the way we judge is postal receipts. The receipts for this office for 1947 was a little over $18,000. In 1953, they were over $72,000. And approximately ten years ago, we had about $75,000 on deposit in postal savings. Now we have $412,000.

C.B.S. Commentator:

How is this translated back into individual homes? You get the answer from Business Woman Minnie Barkin, from Farmer Fricks, from Editor Charles Collins of *The Keowee Courier* and Mayor Brown. But, first of all, from Mrs. Lila Vaughn.

Mrs. Lila Vaughn:

Been working 6½ years in textile plant in Walhalla and it has helped us to save money to buy farm and remodel, we've always sent the children to school, we've bought our electric appliances, such as refrigerator and washing machine and electric stove.

Minnie Barkin, Business Woman:

When I started with this business 37 years ago the typical grocery order was fatback, dry beans, coffee, maybe a can or two of salmon, or syrups or something like that. Now, it's fresh vegetables, fruits and just a regular grocery order like you've got in your own home.

SECOND PRIZE in the Inner Packing and Inner Containers Class of the 1954 Fibre Box Association Box Competition went to inner packing in a box for synthetic yarn. It was made by Union Bag & Paper Corp., New York City. This type of inner packing holds the spools of yarn rigidly in place, and because the spools are held by their cores, the yarn is not touched by the inner packing. Wound spools of varying diameter may be placed in the same package. The trays are shipped flat to the customer and are easily assembled and packed. In addition, the trays materially increase the rigidity of the sides and ends of the box.

Farmer Fricks:

See that Ford tractor? I bought it. See that Chevrolet pick-up? I bought it. And I bought an electric stove and washing machine and several things in the house.

Editor Charles Collins of *The Keowee Courier*:

I can see farms that some years ago were unpainted and unfenced with eroded land now, from people working in textile plants, having that extra income, have fenced off their places, painted them, have cattle on them and nice pastures. It's helped tremendously.

Mayor Brown:

And our business for the last few years has tripled itself in all our branches. We are particularly in the farm machinery business, in the automobile business, and in the home appliance business. Also, in the building materials business. And we are, also, farmers. So we have a view of all of it. We know what they're up against and, as a rule, our people are more prosperous and have more money than they have ever had in the history of the world.

C.B.S. Commentator:

In addition to the many enterprises he has just mentioned, Walhalla's Mayor Brown has interest in a tourist court and a hotel. He's really busy and beaming. And as for people like farm and factory men, Fricks and Patterson, they testify they prefer their prosperity outside a labor union.

Farmer Fricks:

They're trying to get a union down there at the mill where I work at now. Some of 'em—mostly it's against boss men, say they underpaid.

Worker Patterson:

Yeah, they come about in a "sassy" way and they usually approach people that don't care whether they work much or not, and they paint a pretty flowery picture for 'em—and try to make 'em think that they should be leaders in the mill instead of, maybe, working in the hourly-base jobs.

C.B.S. Commentator:

Although there is some union labor in South Carolina, not a single plant in Oconee County has been organized. The C.I.O. Textile Workers are still trying, not overlooking the women, as Organizer Helen Gregory, from Anderson County, reveals.

Helen Gregory, With C.I.O.:

I am trying to get the ladies interested in the union and get the ladies organized for the union. I visit the ladies, have meetings with them and explain to them what the union is all about, how it runs and what they can do to help better their working conditions and help their husbands make a better living for the family.

C.B.S. Commentator:

C.I.O. field man, Garland Brook, tells his story.

Garland Brook, C.I.O.:

But when we first go into a community we find, most times, that the business men are organized against us into citizens committees. Many of the mills have goon squads and when an organizer attempts to pass out leaflets at the mill gates he gets "cussed" out. And another thing, as soon as we go into a community, when they find out who we are, we are followed by the police and every stop we make, the policemen take the name and address of that worker; then that worker gets a tough time during the next few days and even fired or given additional work to do.

Ben Durham:

My name is Ben Durham, former employee of the J. P. Stevens Co. in Seneca, S. C. I was a doffer in the plant and they began watching me and discriminating against me in union activities. I didn't leave any openings for them, and they began working on my wife there and eventually laid her off, out of seniority. When I mentioned this to the overseer and admitted my union activities by showing him my book, he fired me within ten minutes. And then I filed claim for my unemployment compensation and when my termination paper came back they had insubordination against me. The one that filed the charges against me for insubordination at the hearing didn't know what insubordination was.

C.B.S. Commentator:

And an account, too, from George Lester Williams, a loom fixer.

George Lester Williams:

I work at the Seneca Plant of Utica-Mohawk's mill. I am active in the union. They have added work to my job. I was threatened by the overseer that if I didn't keep my job up better that he'd put somebody on it that could. And I explained to him about this incident where I was letting this machine stand. I was working on two other machines that were broke down and I couldn't be on the other one at the same time. And he said, well, if I didn't run the job better that he would put somebody on it. So I put on my union button and he didn't bother me any more about my union activities. But he has added more to my job, from time to time. But the company has put the pressure on the people. They post no solicitation notices in the mill and threaten to fire workers caught in union activities during the work hours. But still they will send some man around and give him time off to come and talk to me to get me to pull out from the union.

C.B.S. Commentator:

Durham is out of a job, alleges he is black-listed. Williams has not been fired. He still works in the plant. When Reporter Westin asked management for its side of the pic-

COTTON TRADERS FACETIOUSLY BID ON MAID OF COTTON BEVERLY PACK of El Paso as she steps down into the pit after closing the day's trading in visit to New York Cotton Exchange. July cotton futures were quoted at 34.55 cents per pound when the pretty 124-pound Texan signaled the close of the market. Following day she flew abroad for two-week European tour, from which she returned recently.

ture, spokesmen demurred. The same "no comment" came from J. P. Stevens & Co. Inc. of New York, the parent firm of Utica-Mohawk, on the ground that management was not on the defensive and, therefore, no statement was necessary.

Certainly, pro-company sentiments are easy to find. Take two Utica-Mohawk employees, for instance, Ebray Patterson and William Barrett, and others, on the question of union influence.

Ebray Patterson:

Do you mean, er-er,-what percentage of the people are interested in the union? Well, it's a very small percentage. I wouldn't think there would be—at the mill I work at, I don't think there's over one per cent, if that many, that's really interested in it. And if they would be let alone, I don't think it would be one-half of one per cent. I don't know of a single case where anybody has been treated unfair. I don't know of a single case where anybody has been fired or mistreated because of any union activities. Our work load hasn't been increased I don't think over a period of years. The working people in mills are having a better time than they ever had before.

William Barrett:

I don't think we need the union in these plants in Oconee County or even in the South. We have the legal right, so far as law is concerned, to join the union. And I hope that if we haven't already got it, we will have right shortly a legal right not to join the union and work on in the plant. We notice a lot of times that we hear a lot about our rights but we never hear so much on the other side about the company's rights, the stockholder's right. And if they are bright enough to build these plants and to operate them, I think they are bright enough to manage them without any organized labor.

Worker:

Well, I don't know how you all feel about a union. Now all our churches are against a union. A union is sin. It's the root of evil. That's the reason the preachers always talk to us about it. We've got little young 'uns and, well, myself, take myself, I'd go hungry. I'd go clotheless. When they shut that mill down, why I've got nothing to look to, without it's my farm. You don't make very much off of the farm altogether.

Mayor Brown:

There is no interference in any way by manufacturers or individuals anywhere to prevent labor organizations from coming in. And the fact of the business is, they welcome the people to take their own choice.

C.B.S. Commentator:

That last statement of Mayor Brown is challenged by the question—How free is the choice? posed by Ben Durham's wife, Eunice, who says she, too, was fired for union activity from the mills.

Eunice Durham:

They are so afraid they'll lose their jobs if they sign a card and their families will go hungry until they won't sign. That's their very reason for not signing a union card. There's so many people that I have talked to that have told me that they would be glad to sign a union card and that they knew that the union was the very thing we needed here in Seneca, but they were afraid.

Gov. James F. Byrnes:

The industries that have come to South Carolina have not come here for magnolias, moonlight nor moonshine. They have come here to make money. They have prospered. No business established since 1945 has failed. Many have expanded.

C.B.S. Commentator:

There's a ring of conviction in that declarative sentence of Governor Byrnes that seems to apply to the whole South. Its incipient industrialization is already there, a hard and a growing fact, to be recognized no matter which side of the political, economic or social fence you are on.

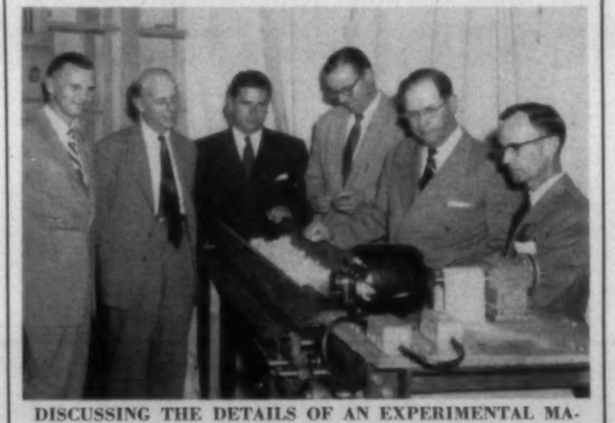
Westin went back to that hard-headed ex-banker, L. W. Bishop, head of South Carolina's Planning and Development Board, for a final size-up of the situation.

L. W. Bishop:

Let me come back and tell you again that I have great respect for that bunch of Yankees up North, and they are smart boys and they are highly lovable people. They are great people, and it's just a question of this country settling down and finding itself. We are a growing country. We will continue to expand, and our economy is getting greater all the time. And I am satisfied that when someone of this business leaves the North and comes South there's other new things that will open up. I think in electronics. I think in certain types of specified skills—it's well suited to be in the North, and it will find itself, and it will seek its level and settle out, and we'll all be happy, too.

C.B.S. Commentator:

Growth can be painful. Happiness is a relative, changing thing. But that, as an armchair philosopher might say, is the way that life is lived in *The World Today*.



DISCUSSING THE DETAILS OF AN EXPERIMENTAL MACHINE designed to clean mechanically harvested cotton are *(from left)* William A. Turner, vice-president, Avondale Mills, Sylacauga, Ala.; Walter G. Regnery, president, Joanna (S. C.) Cotton Mills; Charlton H. Williams, president, Swift Mfg. Co., Columbus, Ga.; George S. Buck, technical director, National Cotton Council, Washington, D. C.; Carl R. Harris, executive vice-president, Erwin Mills Inc., Durham, N. C.; and Ralph A. Rusca, acting head of the cotton mechanical processing section of the U.S.D.A. Southern Regional Research Laboratory in New Orleans. This group of textile industry leaders was in New Orleans recently for an annual review of progress in cotton mechanical processing investigations. In this way the Southern laboratory obtains suggestions and ideas for maintaining a practical, effective program of research. Members of the group are appointed as collaborators and serve on a rotation plan. This year is the first for Mr. Harris and the last for Mr. Turner, who is retiring after completing a four-year term.

A HANDBOOK OF TWISTING

By NEAL TRUSLOW, Superintendent of Product Development, United States Rubber Co., Winnsboro, S. C.

— Chapter II, Part Three (Twisting Devices) —

Mule Spinning

THE mule spinning method was invented by Samuel Crompton in England about 1799 when he combined Arkwright's principles of the water frame with Hargreaves' spinning jenny. This hybrid combination was jokingly called a mule but the name has remained in use since that time.

Generally speaking, the machine proper (see Fig. 2-14) consists of a headstock which contains most of the mechanism for operating the various parts, the creel for holding the roving that is to be converted into yarn, the delivery rolls for feeding the roving, the carriage that carries the spindles for twisting and winding the yarn, the cylinder for driving the spindles and the fallers for guiding the yarn onto the spindles and keeping it under tension during winding. In some cases, drawing rolls are combined with the delivery rolls so that the roving is drafted to some extent before it is delivered. The best mules are reputed to be made in England, but a number of quite satisfactory machines have been made in this country. Westcott & Sons, Hopedale, Mass., and Davis and Furber, North Andover, Mass., are two well known builders in the United States.

On a mule, the roving is first delivered through a set of delivery rolls while the carriage moves outward to take up the amount of roving delivered. In some cases the carriage moves outward faster than the roving is delivered so that the roving is attenuated into the desired yarn weight. As the carriage moves out, the spindles are revolving and inserting twist in the yarn. This is accomplished by having the upper ends of the spindles below and inclined toward the nip of the delivery rolls. This results in a few open spirals of yarn wound on the spindle and then each additional coil slips off the tip of the spindle and appears as a turn of twist in the yarn. This twist during "the draw" gives added strength to the strand and produces a more uniform yarn since the twist tends to go into the lightest section of the yarn and thereby prevents further drafting of that section. For woolen yarns, the roping is drawn out to about twice its original length during this "spindle draft" operation. After the carriage has reached a predetermined position, the delivery rolls and carriage stop moving but the spindles rotate at an increased speed until the desired twist is inserted in the yarn. During this twisting stage, the carriage slowly starts backward in order to compensate for the shortening of the yarn due to the twist being put into it. After the twisting is completed, the spindles make a few revolutions in the opposite direction to back off the open coils. Then the fallers assume their proper position to wind the yarn onto the spindles. During the wind, the carriage moves toward the head stock at a speed to keep the correct yarn tension. This completes the cycle of operations and the procedure is repeated.

Modern self-acting mules (which perform the above operations automatically) require five to 15 horsepower to operate and occupy a floor space of 40 to 100 feet in length and 11 to 12½ feet in width. The number of spindles per frame varies from 200 to 450. The spindle speeds vary from 3,000 to 5,600 r.p.m.

Mule spinning today is used on cotton only for the finest counts of high quality yarn. On woolens, the majority of yarn is spun on mules but an increasing amount is being ring spun. The mule is particularly well adapted to produce soft and uniform yarns and to handle short and weak fibers. However, the disadvantages of mule spinning will probably cause this method of spinning to gradually disappear. Among these disadvantages are (1) small inter-

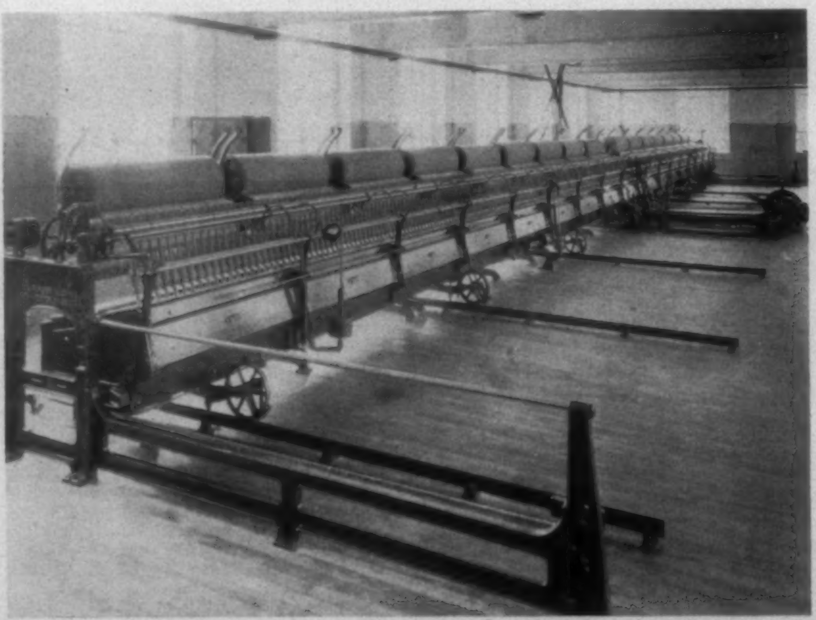


Fig. 2-14—Woolen spinning mule. (Courtesy Davis & Furber Machine Co., North Andover, Mass.)

mittent output, (2) large floor space required, (3) difficulty in making machine repairs, and (4) highly skilled operators needed.

The Down Twister

Twisting frames that use the ring and traveler principle and in which the strand travels from a supply package down to a rotating twisted yarn package are called down twisters. The term is reserved for machinery used to handle either filament or plied yarns in order to distinguish it from equipment used for spinning staple fibers. The term "doubler" is also used for this type of equipment since it frequently is used to make two-ply or "doubled" yarns. It is also possible to use this method for inserting additional twist into a single yarn.

Great freedom is allowed in the selection of the supply packages for a down twister. For steady production of heavy yarns such as tire cord, the supply packages frequently take the form of beams because of the labor saving during the start up when individual ends must be threaded and tied. At other times, spools, pirns, cones and bobbins are used to advantage in down twisters (see Fig. 2-15).

An auxiliary device that is sometimes encountered on down twisters is a trough for holding a liquid that is placed so that the yarn goes through the liquid before going to the feed rolls. The yarn to be twisted is run through this bath in order to soften or to chemically treat the fibers before they are twisted. Such a treatment causes the fibers to become pliable so that they will conform to the desired twisted structure and this results in a stronger and more uniform yarn. This procedure is often used for industrial cotton yarns (see Fig. 2-16).

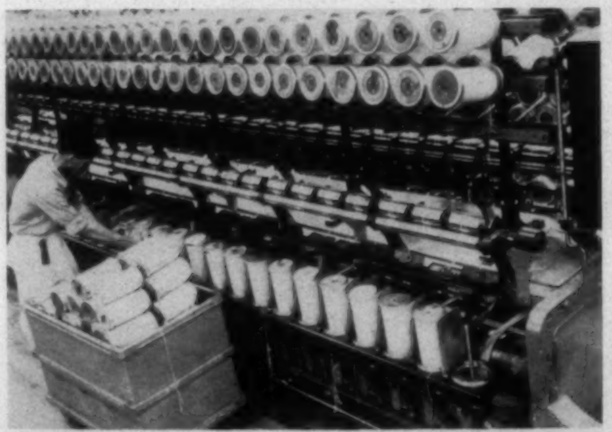


Fig. 2-15—Heavy-duty down twister for tire cord. (Courtesy Saco-Lowell Shops, Boston, Mass.)

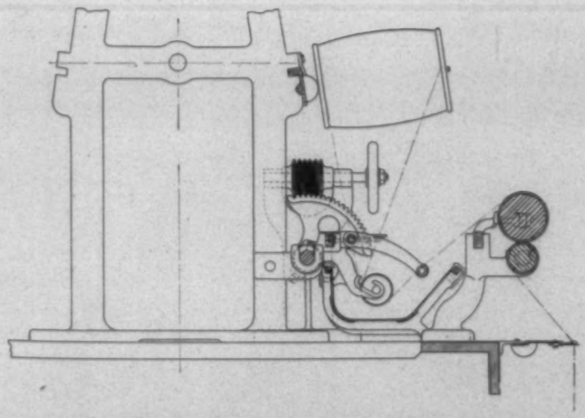


Fig. 2-16—Trough and immersion roll lifter mechanism for wet twister. (Courtesy Whitin Machine Works, Whitinsville, Mass.)

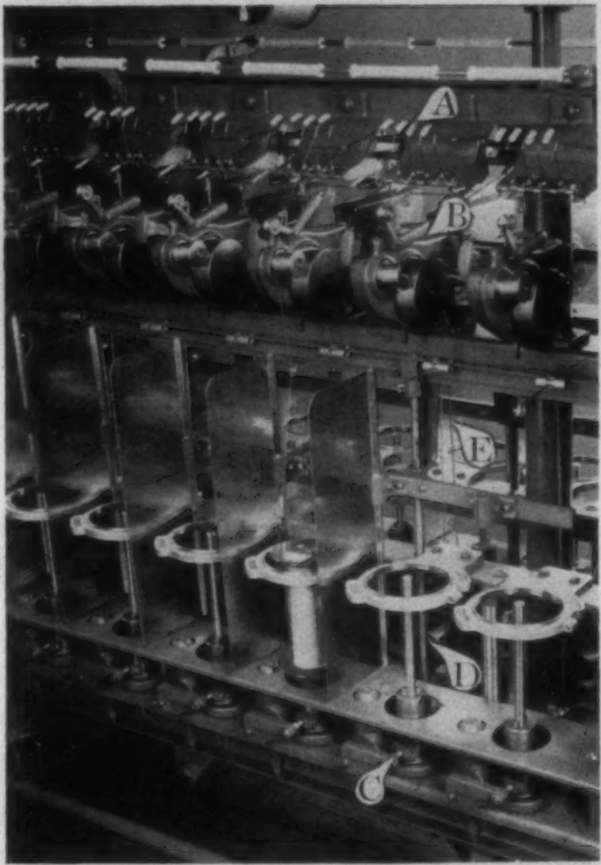


Fig. 2-17—Stop motion for twisters showing the primary stop motion (A), the secondary stop motion (B), brake (C), plunger (D), and cable (E).

When a down twisting machine is handling light weight yarns and particularly when handling the finer denier filaments, it is equipped with a stop motion device for each single end (see Fig. 2-17). If the end breaks, a knock off is actuated and the spindle is stopped. This arrangement is necessary to prevent large amounts of expensive waste.

Some down twisters are equipped with more than one set of feed rools so that the amount of twist being put into the various single yarn components can be varied. This results in the production of fancy yarn like boucle seed and bunch yarn. A leading manufacturer of equipment for producing these novelty yarns is Collins Bros. Machine Co., 647 Roosevelt Avenue, Pawtucket, R. I.

Down twisters can be classified according to the type of ring used: horizontal, vertical or conical. These terms refer to the plane and shape of the flange on which the traveler fits. Horizontal rings for twisting are built like those for spinning with either a single flange or a double flange, the latter usually representing a saving since it can be reversed and the second flange used after the first is worn out. The vertical ring is one in which the flange is a vertical steel band which is often pressed into a holder or into the hole in the ring rail. The vertical traveler is shaped like a question mark with the lower end turned upward to the left and it fits around the top and bottom edges of the steel band. The conical ring as manufactured by Herr is

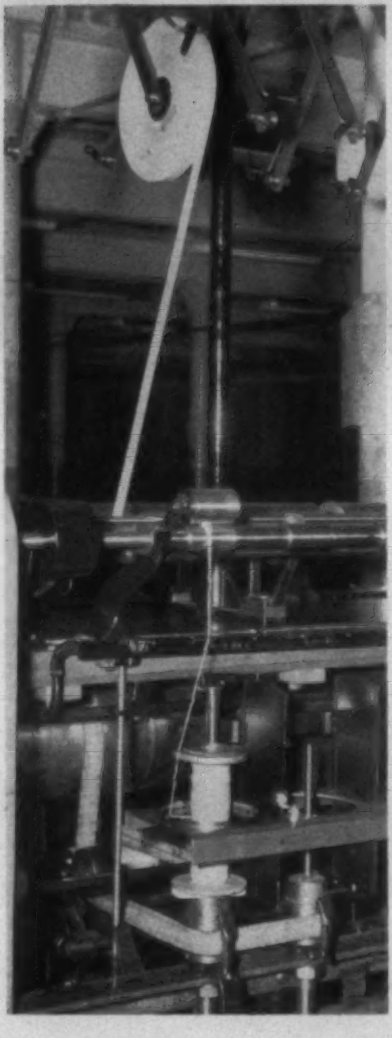


Fig. 2-18 *(left)*—**Twisting kraft paper on a ring twister. (Courtesy Saco-Lowell Shops.)**

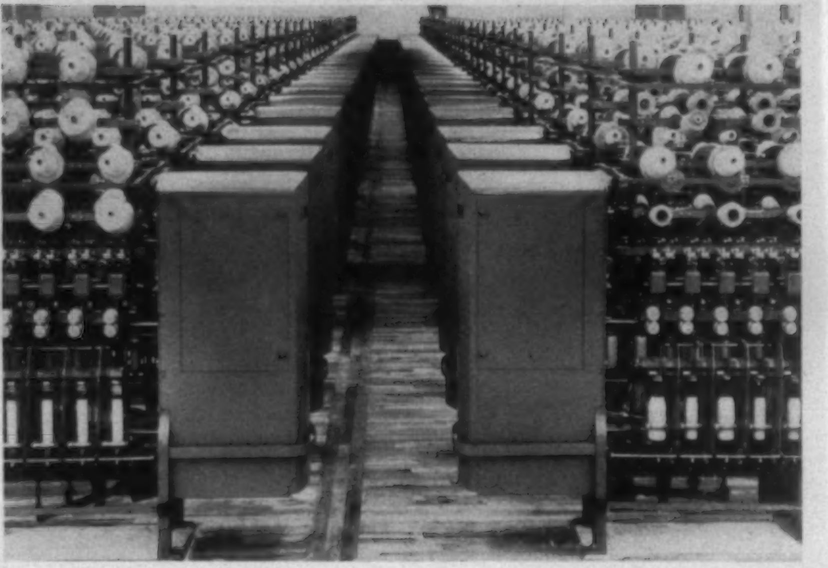


Fig. 2-19 *(above)*—**Modern doubler twisters for making two-ply yarn. (Courtesy Fletcher Works Inc., Philadelphia, Pa.)**

a combination of these two, and is used more for spinning than for twisting.

The take-up bobbin may have yarn capacity ranging from one-half to 2½ pounds with the traverse between 4½ and eight inches. On some machines the traverse can be varied so as to build a tapered or straight bobbin. Spindle speeds are slow when compared to up-twisting because of the limitations imposed by the traveler. The speed of operation is generally from 3,000 to 9,000 r.p.m. depending upon the yarn and the machine. The practicality of this method is at its peak when it is used for a dual purpose such as doubling and twisting, but in some special applications (such as in twisting paper as seen in Fig. 2-18) the action of the traveler seems to aid in the formation of the desired twisted structure.

N. C. State Professor Writes Story Of Silk

Prof. Arthur C. Hayes of the School of Textiles at North Carolina State College has made a major contribution to Volume 12 of the Encyclopedia of Chemical Technology, soon to be published by Interscience Encyclopedia Inc., of Brooklyn, N. Y. The veteran N. C. State faculty member wrote the encyclopedia's entire section on silk—a subject in which he is an authority. His article, illustrated with charts and tables, will fill about ten pages of the publication. Professor Hayes was requested to write the article last Spring and completed the exhaustive manuscript several weeks ago. He received and checked the galley proof early this month and expects to see his material in print soon.

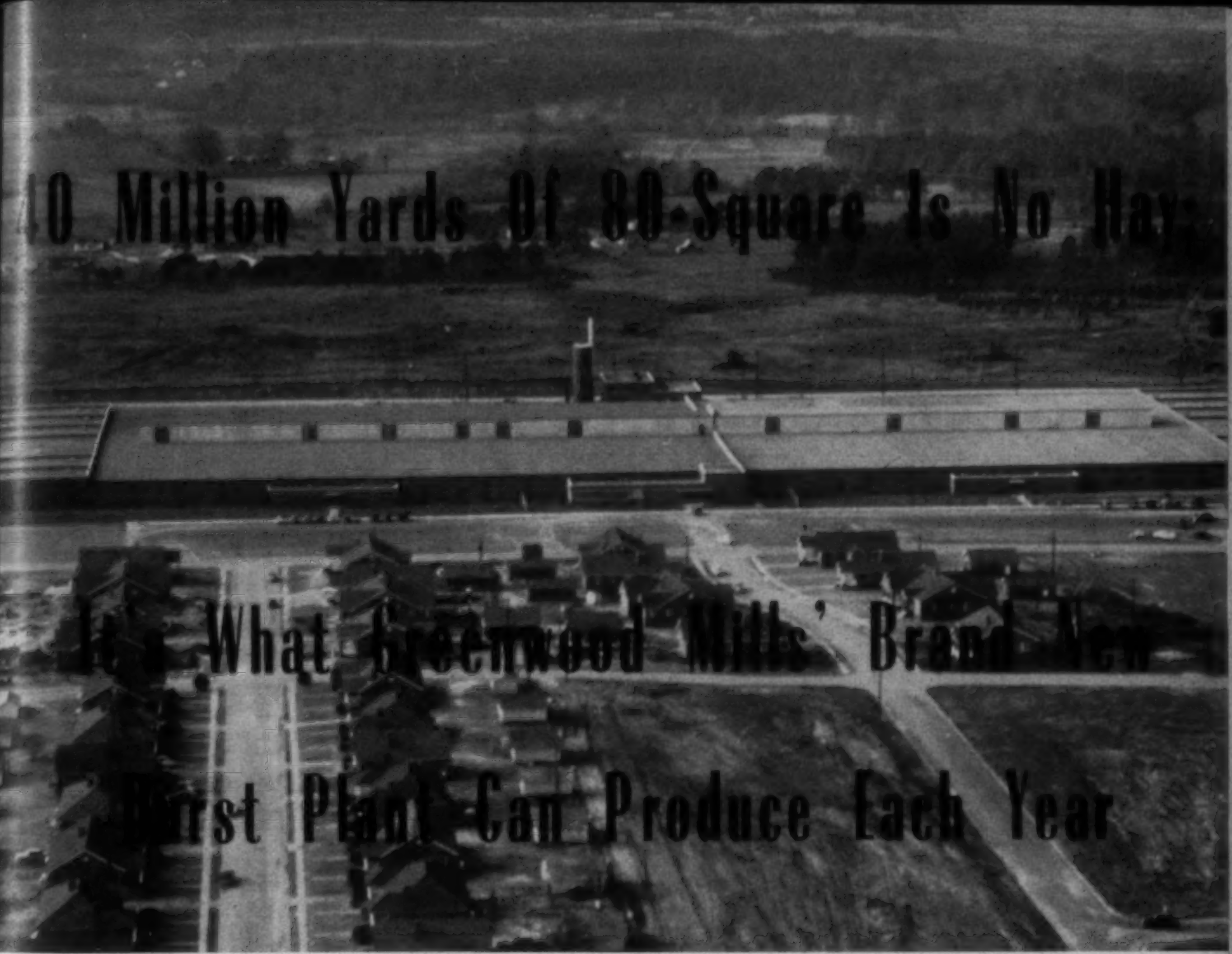
The article covers the historical background of silk and includes a comprehensive account of sericulture, the growth and cultivation of silk worms. It also describes a wide variety of other subjects relating to silk. Among these are silk processing, spinning, weaving, knitting, dyeing, printing, finishing, weighting, marketing, uses, production, consumption, and physical qualities. Of significance to silk marketing is Professor Hayes' report on silk grades and specifications, which will be featured in the encyclopedia's silk section.

Before joining the N. C. State faculty in September 1936, Professor Hayes worked for two years in the textile department of the Qwangtung Provincial Sericulture Bureau at Canton, China. He is a native of Canton, where his parents were Southern Baptist Missionaries. He is now an associate professor in the Department of Textile Chemistry and Dyeing at State College. He holds degrees from Brown University and North Carolina State College.

Survey Indicates More Use Of Metallics

More metallics will be used in fabrics by leading textile designers and weavers, according to an impartial national survey just completed by Corporate Relations Audit, a research concern, for Metlon Corp., manufacturer of metallic yarns. Other facts brought to light by the survey which covered 200 leading users of metallics was that metallics had a definite favorable effect on profits, and that a heavy percentage of opinion was that metallics were not in the "novelty" category but were considered as staples by 65 per cent of those responding. Many answering the survey said metallics had had a substantial effect in increasing sales, and many stated that metallics were their top selling item. In answer to the question "Do you have plans and ideas for expanding use of metallics in your line?"—77 per cent said "yes." Comments included "Metallics have great value in adding new visual values to our line."

40 Million Yards Of 80-Square Is No Hay: It's What Greenwood Mills' Brand New Durst Plant Can Produce Each Year



The new Durst Plant is approximately 1,200 feet long and 350 feet wide, is equipped with more than 1,700 looms and 60,000 spindles.

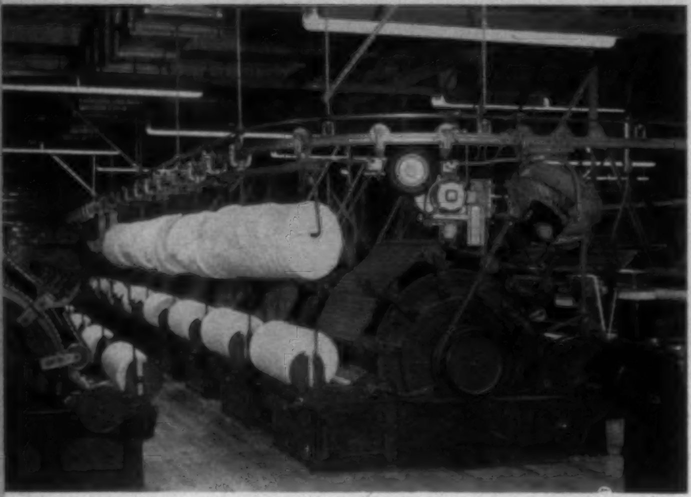
THERE is little doubt about the outlook for cotton in Greenwood County, S. C., where Greenwood Mills is pushing its new Durst print cloth plant into full operation. In about two months the plant will be in full operation, turning out some 40,000,000 yards of 80-square cotton print cloth annually.

This solid vote of confidence in the future of cotton is part of a 20-million-dollar expansion and modernization program that Greenwood Mills started following World War II. The Greenwood Mills organization also consists of four other plants—Greenwood, Mathews, Ninety Six and Harris, all in Greenwood County. Owned and operated by James C. Self, president since 1908, Greenwood Mills now has a combined total of 300,000 spindles and employs some 6,000 persons. The new plant in full operation will employ about 700 and will consume 22,000 bales of cotton a year. Equipped with 60,000 spindles, it will manufacture fabric designed to lend itself to the newer finishes now available and any that may be developed in the future.

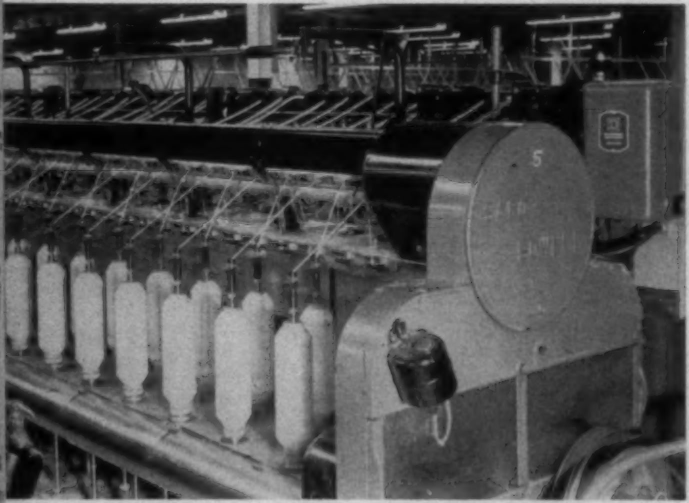
Explaining why Greenwood Mills was investing some $6,000,000 in a new cotton mill, Mr. Self recently stated, "Government figures indicate that the population of the U. S. is increasing at the rate of 7,000 persons a day. That means there will be a greater demand for everything, especially food and clothing." He went on to say that Greenwood has confidence in the future of the textile industry and that the building of this new plant was proof of that. "Moreover, this new Greenwood product adds further diversification to the fabrics we already offer our customers—fine combed and carded cottons, corduroys, filament and spun synthetics. We feel that new and improved finishes have helped create a broader demand for high-quality cotton print cloths."

The construction department of Greenwood Mills built the new plant with the exception of the air conditioning, heating, plumbing and other such special contracts. Mr. Self reported that the cost of the plant was financed with the earnings of the company and that no funds were borrowed. Observing that he believed it to be the first completely new

James C. Self Sr.: "Good cotton, good equipment, good organization . . . that's the secret of success."



Carding . . . . to ⬇



Roving . . . . to ⬇

cotton print cloth mill to be built in this country in 25 years, he estimated that to duplicate the plant would cost approximately $150 per spindle at current machinery prices.

The plant, which covers ten acres, is of one-story construction, 1,200 feet long and 350 feet wide. It is completely air conditioned with ten large and one small evaporative cooling units that give a complete change of air every 4½ minutes. The building was planned by the company and particular emphasis was stressed on machinery layout and materials handling in the plant. The successive processes are laid out in 1-2-3 order so that a minimum of handling and physical effort will be required of the individual worker. It is felt that the ground level location will eliminate practically all vibration.

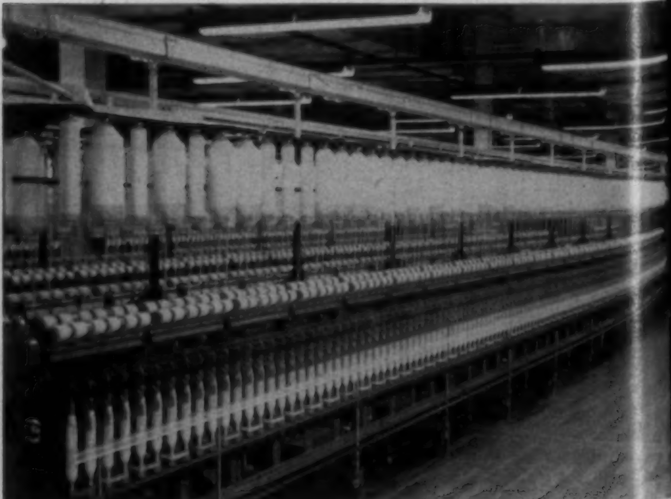
Bales of cotton are unloaded from rail cars by lift trucks and placed in the warehouse corridor. They are weighed by a scale traveling on an overhead crane. Following this operation, the bales are stacked by lift trucks in warehouse sections near the opening room and moved to the opening room as they are needed. The opening and picking rooms are located as near as possible to the center of the cotton storage rooms.

As the laps are doffed from the pickers they are placed on an automatic traveling lap scale. If the laps are within prescribed weight tolerances, a green light comes on. A red light indicates an over or under weight lap that is rejected. The weight of each lap is printed by an automatic recording device incorporated on the scale. Laps of proper weight are placed on a lap conveyor that carries the laps to the cards. This conveyor operates on an overhead electrified rail and consists of three trains carrying ten laps each.

Cans for the cards and drawing frames are the large 42x15-inch cans which have twice the capacity of the standard 36x12 cans ordinarily used in cotton mills. The roving frames produce 12x6-inch roving packages. Each frame is equipped with an Adams stop motion which stops the frame as soon as one end breaks. A red signal light indicates to the operator that the machine is not operating. The Saco-Lowell spinning frames are equipped with umbrella-type creels, the Duo Roth drafting system, and Pneumafil. Underframe and overhead cleaners with ceiling cleaner attachments are mounted to the frames.

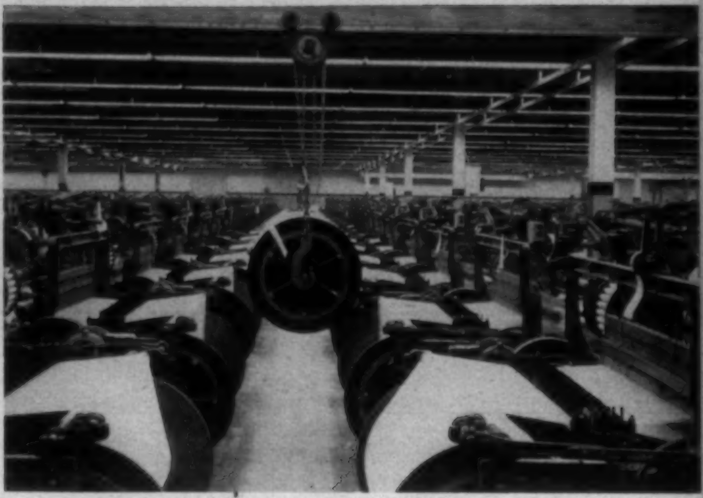
An overhead type of conveyor is used to move beams

Drawing . . . . to ➡



Spinning . . . . to ➡

. . to Cloth Room ◀



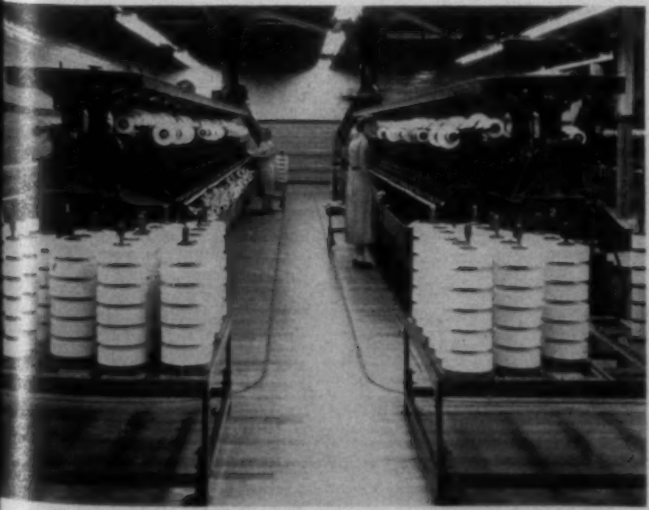
Weaving . .

from the warpers to the slashers. A similar type of overhead conveyor is used to move the beams from the slasher to the storage. In the weave room this type of conveyor is again used to transport the beams to the looms. The Draper E and X Model looms are equipped to use the large 28-inch loom beams which can accommodate 2½ times as much yarn as the usual 20-inch loom beams.

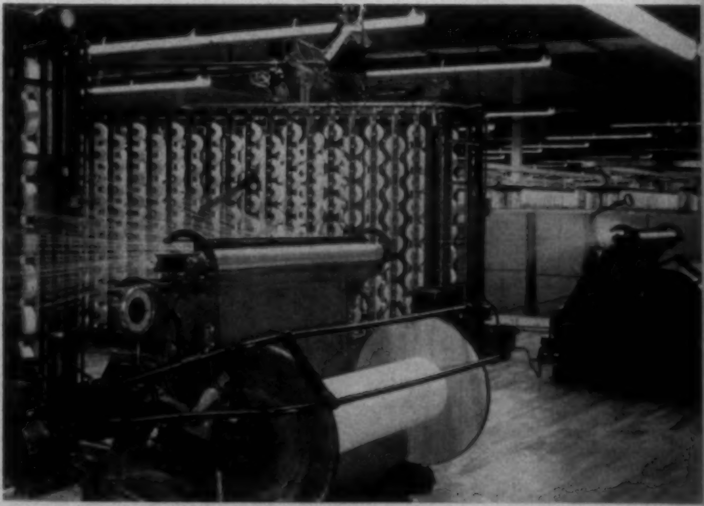
Officials of the company point out that while there isn't anything radically new or different in the machinery or equipment in the plant, every effort has been made to make the most efficient use of the manufacturing area and proven machinery, and to incorporate in the individual processes all the refinements and improvements appropriate to this type of manufacturing.

The plant was named after William Lowndes Durst, who was the organizer and first president of Greenwood Mills. J. F. Chalmers is general superintendent of the new plant as well as the other four plants. The new superintendent is F. T. Hurt—his assistant, R. M. Yonce. Supervisors for the new plant were chosen from employees at the other mills. Most of the operating personnel came from the other four

Slashing . . . . to ▲



Spooling . . . . to ▶



Warping . . . . to ▲

plants too, although a portion of the employees are newcomers to the Greenwood Mills organization.

When queried about the possibility of a finishing plant for the five mills, Mr. Self stated that Greenwood Mills is too diversified to permit competitive finishing of its own products. Company officials pointed out that the finishing industry appears to already have ample capacity and the ability to meet all requirements and that Greenwood Mills has confidence in the converter in a competitive market.

Another Greenwood Mills project currently under construction is a power plant which will serve all five of the company's mills at a cost of seven mils per kilowatt hour. It is expected to be in service within a year.

The Greenwood plant is the oldest mill in the organization. It manufactures fine carded cotton fabrics. The Ninety Six plant manufactures fine combed goods. The Mathews plant is the largest individual mill in the world spinning and weaving spun synthetic fabrics. The Harris plant, which was completed in 1950 as a part of the current expansion program, produces filament synthetic fabrics. The production of Greenwood Mills will be two-thirds cotton when the Durst plant is completely in operation. It was formerly 50 per cent cotton and 50 per cent synthetics.

As an indication of Greenwood's reputation for quality products, it was pointed out that the first several million yards of the 80-square print cloth manufactured since the mill went into operation last November were sold to customers who placed orders without even seeing a sample. The company is duly proud of this reputation and the Durst plant should be another step toward preserving it.

Psychology And The Worker Attitude

By DR. D. J. MOFFIE, Head of Psychology Department, North Carolina State College, Raleigh

Here is a psychologist who doesn't talk down from an ivory tower, but who deals with his subject from a practical point of view. Dr. Moffie delivered his remarks during the March 27 meeting of the Eastern Carolina Division, Southern Textile Association, held at the North Carolina State College School of Textiles, Raleigh.

THE psychologist is concerned with the human element in industry. He is not concerned, in your industry, with the mechanical element—the spinning frame or any other machine you have. He is concerned with the man who operates that machine. Most of you supervisors or superintendents are concerned about selling your ideas to people, both those who are above you and those who are under you. In psychology we are concerned in doing the very things I am talking about.

Not too long ago I went up to a plant in Virginia, and during my visit I asked a foreman what was the efficiency of his room. He spilled it right off—96.57 or something like that. Then I asked another foreman: "What is the efficiency of your room?" He answered immediately, and it was about the same. Then I asked: "What is the efficiency of your men?" He was amazed. We know about the efficiency of our machines down to the second decimal place, but what do we know about the efficiency of the people who operate those machines and who contribute to their productivity?

I am sure that in industry we have left untouched the most important element in our work, because after all the human element is the most important one. When you think of your own plant are you not convinced that the kind of people you have in it at all levels—the employee level as well as the executive level—and how well those people work together as a team, how well they execute your ideas, how well you work with those on the same level as you are, are you not convinced that those are the secrets of the real success of your operation? At State College we have always felt that the boys in engineering, in agriculture, in business, in textiles, need to know more about human behavior. Therefore he does get some training in psychology, etc. Here in the textile school 80 per cent of the graduates go into managerial jobs, and when they get into managerial jobs they need to know more about what makes people tick and how they tick. So they need to study psychology.

At Pennsylvania State University a study was made of supervisors in industry. One of the important findings that came out of that study was that the thing the supervisors placed at the top, the thing they needed more knowledge of, the thing they wanted to know more of, was the human element in industry. They put that at the head. I am sure if I were to ask you what are the most important problems you have, what are the problems that keep you awake at night, what are the things most difficult to deal with, you would say they are not the technical problems but the human relationships—how to deal with those under you, how to work with your boss.

This all leads me to one area of psychology that I should like to discuss—the area of attitudes, because unquestionably the worker's attitude is what determines the effectiveness of the work he does in his job, whether he be a laborer, a knitter, an engineer, or a chemist. If his attitude is good we may expect high productivity and may expect high morale. If his attitude is poor then we may expect poor productivity, poor morale, and even accidents. One of my main interests is accidents. The man who is unhappy in his job, who does not give a darn, is going to have more accidents not only on the highways but in the plant; and the worker who is happy in his work is going to give you better production and fewer accidents.

The problem of attitudes is tied up with how we feel inside. As we say in psychology, the matter of attitudes is probably the hardest to measure and to mold into shape. How many of you have a worker who has come from another plant and who is always on the defensive? He does what you ask him to do, but he does it unwillingly and probably with a lot of griping behind your back. You say he has a poor attitude. Of course, as frequently happens, he might be fired. But let's look at the history of that man or that woman. The history probably indicates that that person has been that way before he or she ever came to your plant; if you contact your references and get a really good work history you would find that that worker was that way before he or she ever came to you. You would also probably find that that worker has had a lot of insecurities and probably never was able to produce or be satisfied with the production that he or she was carrying on. You also may find that there may have been some home conditions which contributed to the attitude in the plant. Of course, you can fire that worker, but what else can be done? If we find a supervisor who can understand why, who can get to the cause of some of those attitudes, I am sure he might make considerable headway in making that worker more valuable to the company.

If the morale of the workers in an industry is low, look to the supervisor. It may be that his attitude is not right and the workers reflect it.

Bear this in mind, then, that a poor attitude is something you bring with you; and generally it is long-lived or deep-seated; you do not develop it overnight. Consequently, if there is a poor attitude in the plant, look to your supervisors or those who may have brought about that condition in the plant. The attitude itself, you see, is the reflection of the feelings that the person has.

Psychologists have spent a great deal of time in industry in a discussion of what we can do for workers to make them happier, to make them more satisfied, to have them become a more productive unit. It has been shown, I think, by studies in industrial psychology that the most important attitudes are as follows:

The first one is the attitude of security or insecurity. Probably you have never thought about it. But there is enough evidence in the field to warrant the conclusion that workers are not striking for higher wages, though of course they want higher wages. What they want is a sense of security, a sense of belongingness. How can we build a feeling of security, and how can we build a sense of belongingness? I think that many supervisors have missed the boat in that they will never allow a worker to come up with an idea. I visited a textile plant not long ago where a supervisor had a good idea on that. He had a small committee, the members of which rotated. The committee got together about once a week, and in that session once a week they discussed ways and means by which they could improve the actual doing of the job. The surprising thing was that many, many ideas for the improvement of the work came from the workers themselves. By doing this the workers felt they were contributing something to that department; they contributed to the feeling of security in that department and developed a feeling of belongingness. I think many supervisors have missed the boat because they have not put in effect something like this simple little idea of having a committee to discuss these things. After all, who would know better how to make improvements in the work than the workers themselves?

A study has been made of the multiple-management method, which many companies are using. It is a new thing and it has its field, just as any new technique has. Yet it has many, many good things in it. I know in one company there is what is called the junior management board. This board is made up of supervisors and made up of heads of departments. They meet regularly and have their own rules and policies of operation, just as the senior board has. What they do is that they come up with ideas, and if an idea is accepted by the junior board it is sent up to the senior board, which accepts it or rejects it. In other words, the junior board has no executive authority but acts merely in an advisory capacity to the senior board. The interesting thing is that in eight years of operation of this scheme 2,019 ideas came up and were recommended by the junior board; and 2,008, or nearly all of them, were approved by the senior board. Now, what does that do to the junior board? It gives them the feeling that they are contributing to the management and to the well-being of the company.

A. M. Moore Jr. Succeeds J. P. Hughes As Chairman Of Eastern Carolina S. T. A.

A. M. Moore Jr., superintendent of the No. 6 Plant of Erwin Mills Inc., Durham, is the new chairman of the Eastern Carolina Division, Southern Textile Association. He was elected at the group's Spring meeting to succeed J. P. Hughes, superintendent of the Eno Plant, Cone Mills Corp., Hillsboro, N. C.

The division's new vice-chairman is J. K. Bruton, superintendent of Erwin No. 5 at Erwin, N. C., and the secretary is E. H. Fuller, assistant superintendent of Roanoke Mills Co., Roanoke Rapids, N. C. Newly-elected to the executive committee is J. C. Farmer, superintendent of Henderson (N. C.) Cotton Mills. Continuing on the executive group are: C. A. Phillips, superintendent of Edenton (N. C.) Cotton Mills; J. B. Hutchinson, assistant superintendent of Patterson Mills Co., Roanoke Rapids; and W. A. Rhinehardt, superintendent of Golden Belt Mfg. Co., Durham.

In addition to the two addresses by James I. Teat and Dr. D. J. Moffie (published in this issue) which were delivered at the March 27 meeting, those present were given a demonstration and explanation of the Nepotometer, an instrument for predicting the tendency of cotton to form neps, by John F. Bogdan of the North Carolina State College School of Textiles.

It would be well, I think, for you folks who are in an executive position to give some thought to this new idea of management, this idea of a junior board or a junior advisory council.

Of course, I have been interested more in the problem of selecting executives. If it costs $500 to train a spinner it might cost $200,000 to train a vice-president, because after all he might make or break the industry. Most higher executives, of course, are selected by seniority.

What the worker basically wants is some feeling of security, some sense of belongingness. The workers want to feel that they are part of the organization. But they want more than that. A worker wants to feel that he is getting somewhere. He wants to feel that he is improving in his work. What does that mean in your plant? It means that you have to know where your jobs lead, what opportunities there are in the department. It also means that you ought to have in your industry some training for supervisors.

We have gone beyond the stage of thinking that you can have just "hands" in your department. You can not think of an employee as a worker who comes in at eight o'clock and leaves at three. If you are still thinking of an operator in that way I just can not refrain from saying that you are behind the times—unquestionably behind the times if you are not thinking of ways to make that worker a better worker in your department.

We cannot, of course, get away from the fact that workers are thinking about wages; they do want better wages. But there is more evidence day by day that that is not the real problem. I am quite sure that workers themselves sometimes do not know why they strike. There are other things involved besides higher wages.

One important thing is that we need to do a better job of selecting workers and a better job of training workers. In other words, if you start out with a sad apple you are going to have a sad apple at the end. But if we start out with a worker who is fitted to do the job that he or she is going to do, that person will be a happy employee, because he or she—and I suppose in textile mills it is mostly she—will be free from tensions and anxieties and can do a good job.

It has been said that we do not begin to use more than a comparatively small percentage of our real energy, that we are leaving untapped the real potential there. I am satisfied that in State College we are using only from 30 to 40 per cent of the energy of our boys. To utilize that energy better we have to know more about the human element.

To go back to attitudes, if we have a poor attitude it is because something has gone wrong inside us; we have failed to get out of life what we want.

Chairman Hughes: To go back to the beginning, is there any formula for figuring the effectiveness of the worker?

Dr. Moffie: I am afraid not. That is due to the darn complexity of what we are. But I think we need to keep better records—better records of what our workers are doing over a period of time; and over a period of time much of that can be translated into terms of dollars and cents. But there is no simple formula for it, I am sure.

Chairman Hughes: You can not figure that as you do the efficiency of a machine?

Dr. Moffie: No.

Mr. A: I should like to know something about what a supervisor should do in the matter of accepting suggestions.

Dr. Moffie: If we could only teach supervisors to accept suggestions favorably it would be much better. But the trouble is that the supervisor gets on the defensive; he feels that his security is impaired. If a suggestion is made his function, of course, is to accept it or reject it. If he receives it with an open mind not only is the worker's attitude improved but the supervisor's attitude is, too. He must not be rigid; he must not be on the defensive.

Question: What do you do with the worker who is 65 years old and over?

Dr. Moffie: THAT is a good question. Let me say that, from what we know of human behavior, the man of 65 and over is still a very productive human being. Intellectually he has not changed much from what he was at 45 or 55, and emotionally he is just as good as ever. In working with people he is just as good as ever. You are, however, faced with the problem of retirement. The answer there is that you should set up a policy. Every company should have a good policy of retirement. There is no question but that there are some people who are still very productive at 65 and some who are not very productive. Perhaps you can set up some provision for employing workers who are beyond 65.

Question: How would you go about finding out the attitude of the workers in order to determine in what fields training is needed?

Dr. Moffie: If you want to find out how your workers feel about their supervisors, let's say, and about the management and about the company, then I think you have to get someone to make an attitude survey. If you want a training program then I think it must be conducted along the lines I have spoken of this morning—20 or 30 hours' work. Attitude surveys, of course, if conducted well, I think give much valuable information.

Mr. A: What about supervisors' pets?

Dr. Moffie: Of course, I think the training of supervisors helps eliminate that problem. If you work with the supervisors you should be able to show them that they have to be impartial and have to be fair. They need to be trained, I expect, in some of these problems of supervision.

Are there any more questions? We are, of course, 'way over our time.

Mr. G: How about employees' being afraid of their jobs? I had one of our graduates in to see me last week who wanted to change his job because, he said, there was one man in his organization who carried a lot of weight and if he was not on your side you had better get out. What are you going to do about that?

Dr. Moffie: There I think it is an internal problem; it is a question of the supervisor. There again you have the problem of favoritism that was brought out. It is a problem that has to be worked out by the heads of the departments and the supervisors.

The Supervisor And Waste Control

By JAMES I. TEAT, Southeastern Engineering Co., Charlotte, N. C.

A PENNY saved by waste control in the plant is just as valuable to the company as a penny earned on its product. Any saving is of importance to us today. I have for about seven years, or since the war, been saying that to some of you. We had it pretty good in our industry for a time. The thing the superintendent asked us about was how many pounds we were getting out. I was running a weave room down in Georgia in 1947 and 1948, and the question the superintendent always asked me at the end of the week was: "How many pounds of cloth have you gotten out?" Of course, my seconds were pretty high. Then that attitude changed, and we began to think of the seconds and of the waste in the mill. We began to think of how much it cost us to get out so many pounds of first-quality goods.

Waste control certainly affects our unit cost in the plant. It affects it to a far greater degree that most of us, as overseers and shift foremen and superintendents, think about. When you get back to your plant next week, in some of your spare time (of which, of course, the supervisors have so much) think about how much waste your plant is making. Of course you know how many bales are being put out. You know how much hard waste you make, how much soft waste, how much fly waste, how much you take out in flat strips, and so forth—or maybe you don't. But when you have an opportunity next week, after you get ack, find out how much waste you are making in your lant. Find out how much raw material you are taking into our plant, whether it be cotton or worsted or filament ayon or other synthetic, or whatever it may be, and find ut how much you are turning out in your finished product nd how much you are putting out in waste. When you do hat do not forget that you are putting into the goods you urn out other materials. Lots of mills say: "Well, we urn out more pounds of product than we buy of raw material." That may be true, but there is more in the product than the raw material; there is starch and there is water and there is size. To get the cost of your salable waste items we recommend that you add to the cost of the raw material the cost of processing and the cost of the items that you put into your product and from that amount subtract the sales value of the waste. What is left is the cost of the waste. (This would be true at any process.)

It is sometimes surprising to alert, technically-minded textile operating men to find out what that cost amounts to. We have found mills in which it ranges from 1.5 to two cents per pound in filament rayon mills, while in some mills making fine worsted classifications the cost per pound might run to 60 to 70 cents. When you find what that waste costs per pound amounts to compare it to all the other elements of unit cost in your plant and see if it might offer some method of reduction to you.

Then comes the next question: Where is waste reduction possible? Of course, anyone running a textile mill knows he can not run the mill without waste. If we are running cotton we know that there are certain elements in the bale of cotton when it comes in, such as trash, leaf, etc., that we do not want to put into our product. We do not want to sell that trash in our goods, and we have to accept that waste as necessary. There is other waste that is necessary, too. For instance, one of my favorite illustrations is the filling quill. We know it is necessary to leave several yards of waste on the quill for quality production. We also know that, if it is necessary to leave six yards on the filling quill for quality production, and we leave on ten yards, then that extra four yards is unnecessary waste.

When Jim Teat talks about cotton mill waste he means *baled* waste. In this discussion, which was part of the program of this Spring's meeting of the Eastern Carolina Division, Southern Textile Association, he refuses to pin-point the answer to a question frequently asked of him—"What is the average amount of waste a mill should have?"—but he indicates a thorough knowledge of the subject.

Suppose we have a loom beam running out. We know we can not weave every inch of yarn that is on the loom beam when it comes from the slasher. There are several reasons for that. But how much do you need? If you do not know now you might find that there are a few inches of excessive waste being made every time you are taking a warp out in your weave room. That excessive waste is where the reduction in unit cost that I mentioned a moment ago is possible to us, to put us on the other side of the ledger.

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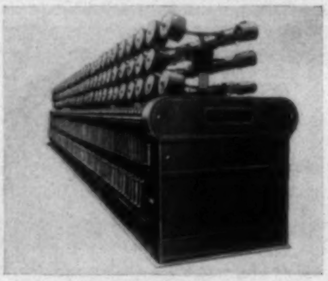

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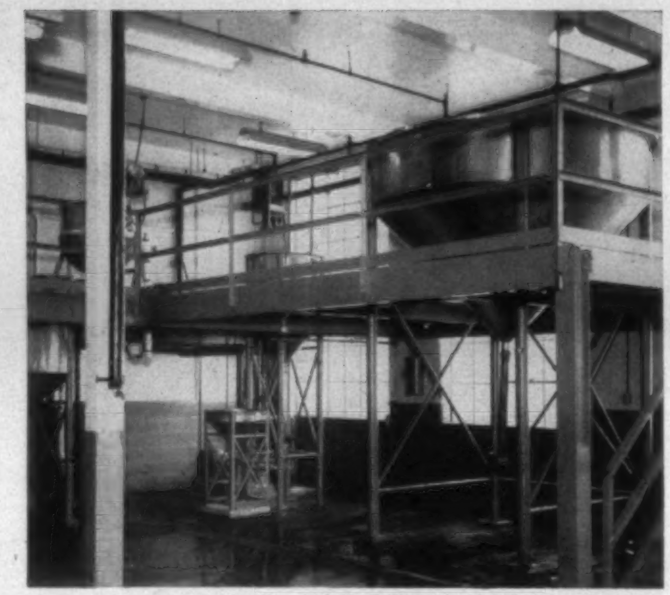

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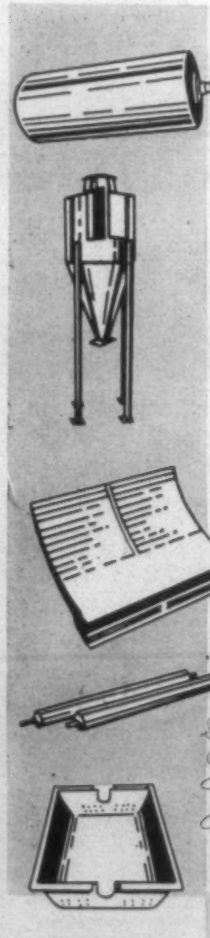

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much it is costing you, how much of it is excessive, and how much can be saved. Then we come back to Dr. Moffie's subject. We find that the major cause that supervisors give for excessive waste in the mill is carelessness of employees. If I were to pass a questionnaire around among you this morning and ask you to list five major causes of excessive waste in textile plants probably every one of you would put down carelessness of employees first.

Let's analyze that a little further. Why are employees careless? Why do they make excessive waste? We come back to attitudes first, although of course the employee might not have sufficient skill for the job. We believe that an employee's causing excessive waste is due to one of those two things, either that he is not sufficiently skilled for the job or that he is careless. So then we come back to you, the supervisors.

We might approach it from the standpoint that we cannot belong to our jobs and cannot keep our jobs and get our pay checks unless we operate efficiently. What we need to do is to produce a good product efficiently at a cost we can persuade the customer to pay. How can we produce that product?

Some of our plants are running only part-time, only three days a week. Their employees still have jobs, but their pay checks have certainly been affected. Now, I am not going to say that those mills could be operating full time if they could better control their waste; I am not going to get myself out on a limb like that. But I do say to you that it is your duty to point out to your workers that if they will reduce the waste it will certainly contribute to the efficiency of the plant and to the security of their jobs.

Chairman Hughes: Can you go into a plant with a set of predetermined standards and say to the manager of that plant: "In order to improve your plant you will have to meet these standards?"

Mr. Teat: We have worked with about 188 textile plants in seven years. Every week we get in our office an average of 130 waste reports, the majority from cotton mills. We have compared waste reports diligently in, say, print cloth mills, where we know the product involved, know the machine efficiency is about the same, and know the cotton is about the same. But even there we cannot set a standard and take it to the next mill down the line and apply it. "My mill is just a little bit different." Have you ever heard that? Well, that is true. Maybe you have the same machinery and the same raw material, but perhaps you handle your waste a little differently.

Take spooler thread waste. Maybe in your mill you count as spooler thread waste what the knotter drops out. Maybe in the next plant the spooler thread waste also includes the tailings. So we cannot take one standard for the two mills. Actually, if you will approach your waste problem in each department analytically it is not too difficult. Approach it in the way some of your time-study men do when they are trying to set up a new job load, and you will find it is not too difficult to establish those standards.

Question: When you and your staff are called in to set up a system of waste control, how long does it take you to set up a system?

Mr. Teat: Are you going to give me a chance to make a sales plug? On the average, about 2½ or three months. I hate to say this, but I will. The only reason for employing a consultant (you know a consultant is a guy 15 miles from home who talks loud, he is called a consultant)—the reason for retaining a consultant is that he takes the time to do what you cannot do. On the average it takes about 2½ months.

Mr. B: What is the average waste in a print cloth mill?

Mr. Teat: If you are thinking about the total waste percentage based on pounds of cotton opened, including bagging and ties and all other things, and not counting invisible waste, including the size and moisture in the stock, I think a good percentage is somewhere around 12 per cent.

Mr. B: That includes the size?

Mr. Teat: No, sir. That is baled waste, total waste baled divided by the total pounds of cotton opened; and it includes bagging and ties. We have one print cloth mill—this is something you will not believe, but I am going to tell you just the same—one mill in our experience that for the past three years has averaged 0.9 per cent total thread waste. That includes soft thread, hard thread, everything. We have another mill that over the period of time of a year averaged 0.72 per cent. Another one averaged 0.81 per cent. For the print cloth mill your total waste should average around 12 per cent. In a combed cotton mill the reworkable waste is usually from 0.50 to 0.60 per cent more than in a carded cotton mill. I am giving you tight figures, good figures. They are not the average for those 180 mills I talked about.

Question: When you say 12 per cent you mean 12 pounds per 100 pounds of cotton?

Mr. Teat: Yes. That is salable waste, baled waste.

Question: Do you attempt to establish a break-even line as to putting back in reworkable waste and its effect in making seconds?

Mr. Teat: We all know the amount of waste we put back in has a definite effect on quality. We try to establish that for each particular plant. We have seen some interesting tests performed in that field. We did not do them; but we were working with a large company which in a large test of cotton divided the cotton into 20 1,000,000-pound lots and ran it through the plant. In each lot they put back a different percentage of waste and ran it through. They have a pretty well staffed research department, with a lot of people, who tested the ends down in spinning and everything else you could think of. On the basis of the tests they made they established how much waste they could put in their product without affecting the sale price of that product and then took the excess waste and put it in products not so critical and sold it.

Mr. C: What about the percentage of waste in a mill running synthetics?

Mr. Teat: Again I am not trying to hedge; but there are so many variables, such as denier, fiber waste, etc., that it is tougher to answer than for a cotton mill. I would say that it should be somewhere between two per cent and five per cent.

Mr. C: Suppose you run a lot of blends?

Mr. Teat: Your waste percentage would be high under those conditions.

Mr. A: Do you know what the correlation is between the amount of waste caused by improper handling and the amount caused by such practices as leaving an excessive amount of yarn on the quills and so forth?

Mr. Teat: As far as a percentage correlation is concerned, I have never correlated it; but I would say the amount of waste from the latter cause is less than the waste made in improper handling. Improper handling of every package, from sliver right on through cloth, is one of the major ways in which excessive waste is made. However, there might be mills where the other situation could be true, where an excessive amount of yarn left on the quills could be the greater. But the waste made in handling is one of the causes of excessive waste in any plant.

Piedmont Division, S.T.A., Meets May 8

The Piedmont Division of the Southern Textile Association will hold its Spring meeting at the Catawba Country Club, Hickory, N. C., May 8. According to H. C. Estes, chairman of the division, the program will include a paper on "Modern European Textile Machinery" by F. E. Bozeman, Southern Agent, Atkinson, Haserick & Co., Charlotte, N. C., and a panel discussion of the highlights of the American Textile Machinery Exhibition at Atlantic City. F. M. Johnson, superintendent of the research department, Pacific Mills Rayon Division, Rhodhiss, N. C., will act as moderator. Members of the panel include R. T. Stutts, president of Carolinian Mills Inc., High Shoals, N. C.; Joe Delany, general superintendent of Joanna (S. C.) Cotton Mills; J. L. James, general manager, Erwin Mills, Cooleemee, N. C.; and H. C. Estes, general superintendent, Pacific Mills Rayon Division, Rhodhiss, N. C. There will be a short business session, followed by a luncheon.

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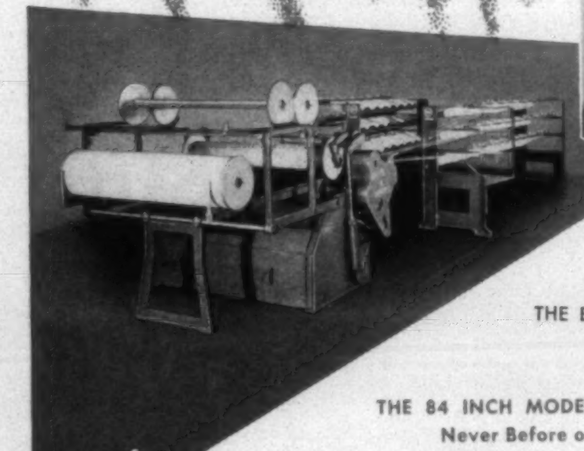

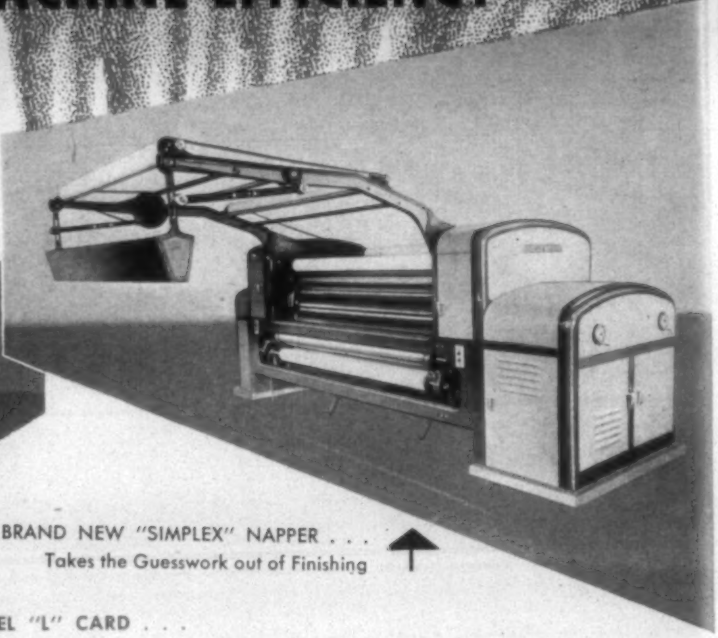

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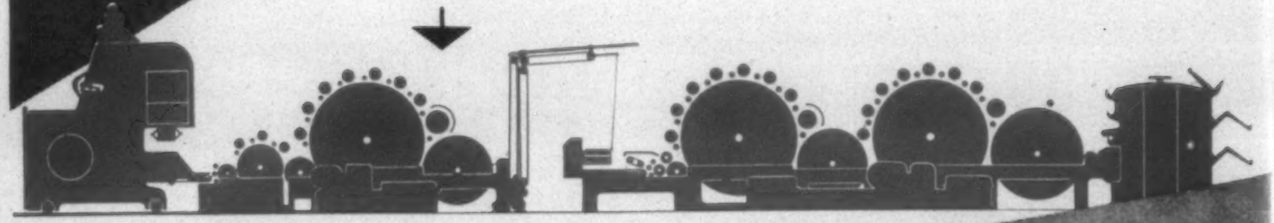

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Industrial Engineering Results In More Productive, Happier Card Tenders

By R. J. KISSIAH, Field Editor

MOST of the textile industry recognizes the importance of research in the development of new ideas, new machinery and new techniques in the search for better productivity, higher efficiency, lower costs and keener quality. Research has paid off, no doubt about it. Yet, another type of research is being neglected to a large extent by many mills and altogether by some. This type of research is devoted to getting the most out of what you've got. It may be known as the time-study department; it may be the function of a testing laboratory; it may be called the industrial engineering department. But it is fast becoming known as a money-savings department in mills where it is successfully utilized.

The following is an account of one of those departments. It is a report from the industrial engineering department of Joanna (S. C.) Cotton Mills Co. where the production of card tenders was boosted to the extent that 15 tenders are now doing better work than 21 were doing previously. Before the work study was made each tender operated 42 cards. Today each tender operates 59.

The industrial engineering department is a new function at Joanna. It was set up about two years ago by Henderson, Lindsay & Michaels Inc., management consultants of Greenville, S. C. Frank Sherrill, chief industrial engineer, was a member of the consulting firm when it installed the department at Joanna and he was Joanna's choice to head the department. The Henderson, Lindsay & Michaels firm is still retained as a consultant.

Joanna had 294 cards—23 of which were running 42-grain sliver on combed work, 20 running 46-grain sliver on drapery fabric and 251 running 46-grain sliver on shade cloth. All were using the standard 12-inch can, with a standard cylinder speed of 165 r.p.m. Lap weight was 14½ ounces per yard on a 48-pound lap. The 12-inch cans held ten pounds of sliver. The doffing cycle was an hour and five minutes or 9½ pounds of sliver per hour. All of the cards were equipped with Saco-Lowell continuous strippers and about half had air strippers. In addition to doffing, creeling and stripping, each tender was required to piece all laps, procure the laps from the picker room and do his own cleaning (which included making mops).

This was the situation before the job study and with these facts to work with the industrial engineers began a series of consultations with the carding room supervisors. The carding room overseer, Claude Franks, worked closely with the group throughout the study, lending invaluable assistance to the group in establishing a proper approach to the situation. He was convinced that the setting up of a standard job plan would be beneficial to his group as well as to the mill, and he contributed his efforts toward realizing these benefits. His enthusiasm lent no small part to the success of the study. This co-operation cannot be overemphasized since without it a mill undertaking a similar project would be slugging with two strikes against it.

After mapping out a general plan of study acceptable to all concerned as practical, the group went to work. It first sought to get more sliver in the 12-inch cans, thereby making them 12 or 14-pound cans rather than ten. Nylon trumpets were first tried in an effort to decrease the bulk of the sliver without drawing it out, but the effort failed due to the fact that at this time nylon trumpets were available in one size only and the orifice in this size was too large to do an adequate job of compressing the light sliver. The uncompressed sliver, when jammed into a can containing 12 to 14 pounds, became non-uniform.

Since Joanna was running light sliver, it was decided to try doffer calender compressor springs at full pressure. The lightness of the sliver might offset the natural tendency for the sliver to be subjected to coring. Before trying this theory Joanna reworked all doffer trumpets to obtain more perfect control over the sliver prior to entering the compressor rolls. Worn trumpets were found to allow the sliver to spread, which encouraged coring.

The springs performed satisfactorily and even when some coring did occur it didn't cause any difficulty because Joanna uses lap winders between the cards and the drawing frames. The lap winders have a very slight draft of 1.05 and this nominal draft served to break up the coring action enough to allow the drawing frames to handle the sliver without difficulty. The result of this part of the study was that the amount of sliver per can was increased to 14 pounds with no significant increase in sliver variation.

The next step was to eliminate lost time during the creeling cycle. As noted previously, the tenders were tending 42 cards. This set of 42 cards were figuratively divided into four parts of ten, ten, ten and 12 cards. The card tender knew, within a few minutes, when any one of the four sections was about to creel. But he did not know when any one of the cards in the section was going to creel, so it was necessary for him to interrupt his work periodically to check all the cards in the section.

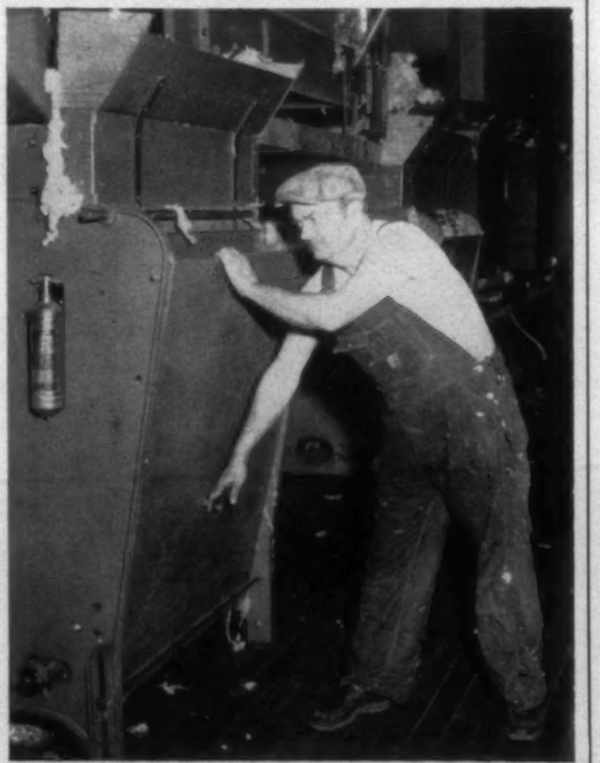
To eliminate this lost time, the industrial engineering department tested the method of dividing the 59 cards into five groups of ten to 12 cards each. Then, whenever one card in the section was ready to be creeled, the tender would creel all the cards in the section without waiting for each individual card to finish its lap. This elimination of random creeling within each section of cards reduced creeling time by 17 per cent.

Naturally the question arises, how many pounds of laps are fed back through the picker in this system of consecutive creeling? Joanna found that this amounted to roughly 1,500 pounds a week at a cost of about $14, a figure substantially lower than the cost of the lost time saved.

The tenders had formerly wiped fronts four times a day. It was decided to reduce this to three and determine if there was any appreciable difference in the cleanliness. None was found and the elimination of that one wiping resulted in a savings of six per cent of the total work time.

Another time-consuming responsibility the tenders had was that of making mops each day. It was decided to study the time it took one man to make all the mops. The study revealed that one man could make all the mops at a savings of six and one-half minutes per tender a day, so the mop-making function became a one man proposition.

Broken down into the four duties of a card tender, the correlated study indicated that doffing required 18 per cent of a tender's day; creeling, 29 per cent; cleaning, 47 per cent; and tending, six per cent. This does not take into account a rest time of 14 per cent a day that Joanna now guarantees each tender. This 14 per cent amounts to 59 minutes a day, but the actual minute count depends on the skill of the tender. Joanna reports that many of the tenders get more than 59 minutes a day because they either work



IN CASE OF FIRE the picker operator can get quickly into the hopper above and remove the cotton, thanks to the suggestion of Joe Odell, an opening room employee of Cone Mills Corp.'s White Oak Plant at Greensboro, N. C. Mr. Odell, shown practicing above, suggested a plywood back for the hoppers so arranged that they could be easily removed in an emergency. (Photo courtesy *The Textorian*).

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harder and/or have discovered "tricks" they use to reduce their work. (These "tricks" were not practical to incorporate in the acceptable work pace because of the small amount of time savings possible as against the considerable amount of time required to teach everybody the little "tricks.") It is to be emphasized that the guaranteed 14 per cent fatigue time is based on an acceptable work pace that was set up only after hours of study.

Now that each function of the tender was more or less standardized, it was possible to set up time-setting rates. By using a number of actual time studies and Basic Motion Time Study tables, the industrial engineers worked out an incentive rate that maintained production at a set rate without reducing fatigue time.

With this done it was necessary to have the plan approved by all persons it affected. The industrial engineering department presented its final findings to the supervisors concerned and discussed each phase of it with them. The supervisors approved it and then, upon adoption, the new plan was put into practice and the results calculated. There, of course, followed a period of adjustment, but within a few days the new job plan was proving as effective as it had promised to be. In fact, everybody concerned was indeed gratified to see the new plan take effect quicker than was anticipated. This quick adjustment reflects favorably on not only the work of the industrial engineers, but also on the co-operation of all the card room employees.

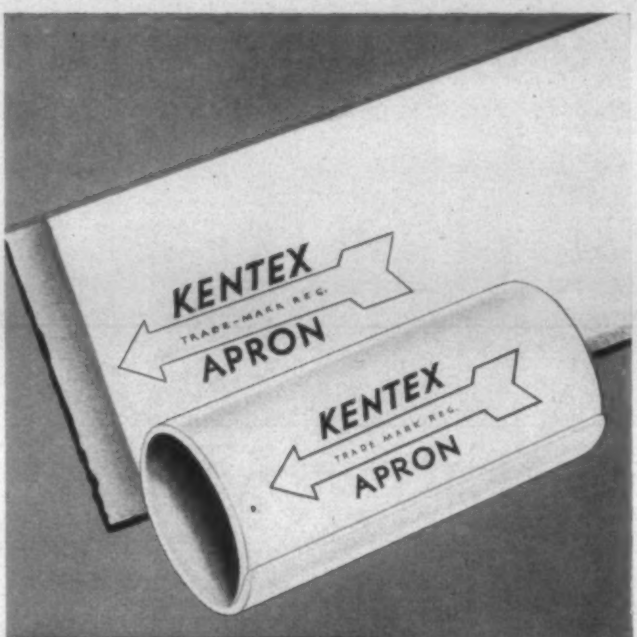
Now, the end results of this study. Joanna is realizing an estimated savings of $12,500 a year from it and the average hourly wage of the card tenders has jumped from $1.22 to $1.30. Joanna also reports that it is getting better quality under the new method of creeling since it reduces lap piecings and discards the last yard or so of the lap which previously contributed heavily to non-uniformity.

In addition to this, the tenders—what with an increase in average hourly play plus the added guaranteed fatigue time—are a happier lot. They now enjoy more job security too, since it is reasonable to assume that since the least number of tenders is doing more satisfactory work than before there is less probability for the tenders to fall victim to a seasonal culling. There are no statistics to back up an assumption that the quality of work has been boosted as a result of the more satisfied tenders, but quality has improved under the plan. Needless to say, Joanna, as evidenced by these results, got its money's worth out of the plan.

Cotton Council Schedules 1955 Meeting

The 17th annual meeting of the National Cotton Council of America will be held at Hotel Shamrock, Houston, Tex., Jan. 31-Feb. 1, 1955, according to an announcement by the council's board of directors. The meeting is held in an easily accessible cotton belt city each year. The 16th annual meeting was held at Hotel Biltmore in Atlanta, Ga. In 1953 it was held in Dallas, and the year before in New Orleans, La. A. L. Durand of Hobart, Okla., is council president and Harold A. Young of North Little Rock, Ark., is chairman of the board of directors.

Turkey appreciates Southern fried chicken. At least Turkey's President Celal Bayar appreciated it on a recent visit to North Carolina as a guest of H. H. Schell, Rocky Mount (N. C.) Mills. He said so in a recent thank you note to George P. Geoghegan Jr., chairman of arrangements for the Turk's visit.



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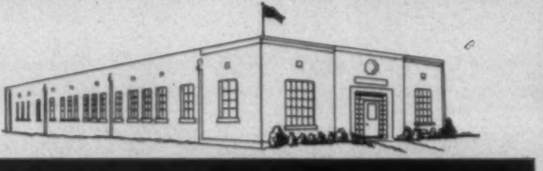

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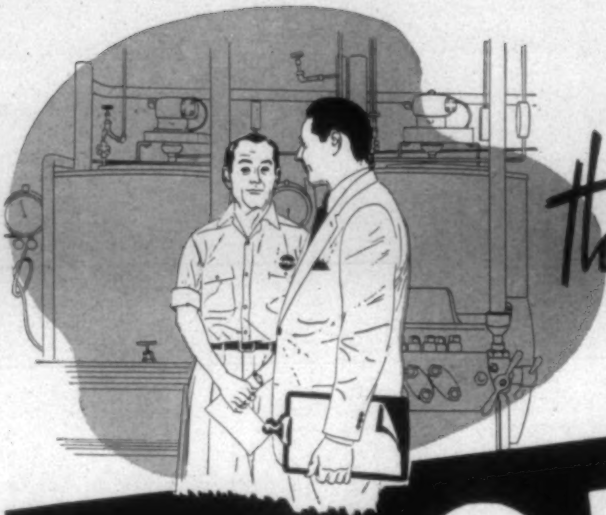

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WEAVING RANDOM STRIPES

The Manufacture of This Pattern Usually Requires a Complex Layout, But a Much More Simple Method Is Also Available

By EDWARD WALLER, Dan River Mills

THE random stripe is a staple pattern, year-in and year-out, for nearly all segments of the apparel industry. It derives its name from the manner in which the pattern is apparently made without a regular design plan.

Actually, this pattern is much harder than an ordinary stripe or plaid to handle in the mill. First of all, the complete pattern of a true random stripe must necessarily be repeated approximately ten or more times across the width of the cloth, and yet the design must be constructed to cause these repeats to so blend with each other that there is seemingly no repetition at all from selvage to selvage. Fig. 1 offers a good illustration of how a random stripe should be made to give the proper effect. Although no real pattern is apparent to the eye, the cloth has acquired a novel character.

The number of ends in one repeat of the pattern in Fig. 1 is 126, which is a very large number considering that no individual stripe consists of more than three ends. The exact layout for this fabric is shown in Fig. 2. The reader will notice that the warp pattern consists of 45 blue stripes either one or two ends in width and spaced from one to three ends apart. The designer has gone to a lot of trouble here to completely break up his pattern, and he has thereby achieved the desired effect in the finished cloth. The result is the same as if the drawing-in hand had drawn in each end of the warp at random. However, by having all hands follow a definite drawing-in plan there is no danger that warps drawn by different individuals will not have the same general appearance As in most patterns of this type, only two colors have been used in the warp.

If the designing of the pattern is not skillfully done, there may be one or two places in each repeat where stripes show up noticeably heavy or light; this harmful condition will destroy the pleasing over-all effect of the pattern and detract from the appearance of the cloth.

There exists a simple method for imitating the random stripe discussed above, which we have seen is not only tricky to design but also difficult to pick up during warping, slashing, and weaving. A fabric made by this second method is shown in Fig. 3. Here the number of ends per repeat is only two, instead of the 126 ends per repeat used for our first fabric in Fig. 1, and therefore the warp of Fig. 3 is considerably easier to make.

When the warp is drawn in, one end of each color goes into the same heddle and also through the same dent in the reed. Fig. 4 shows the drawing-in draft and dobby

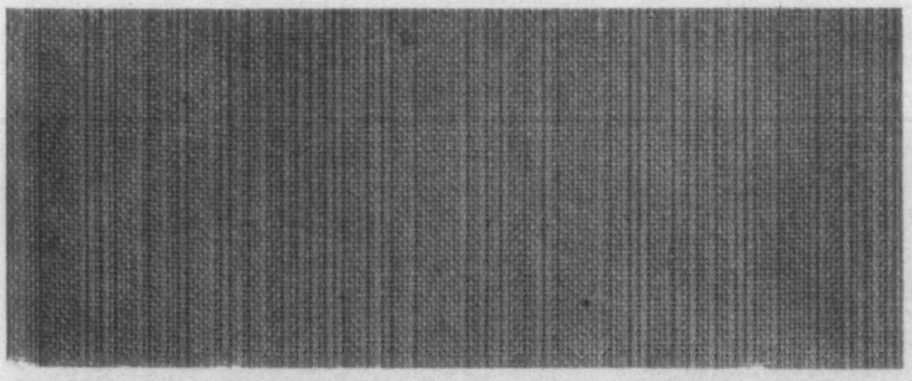


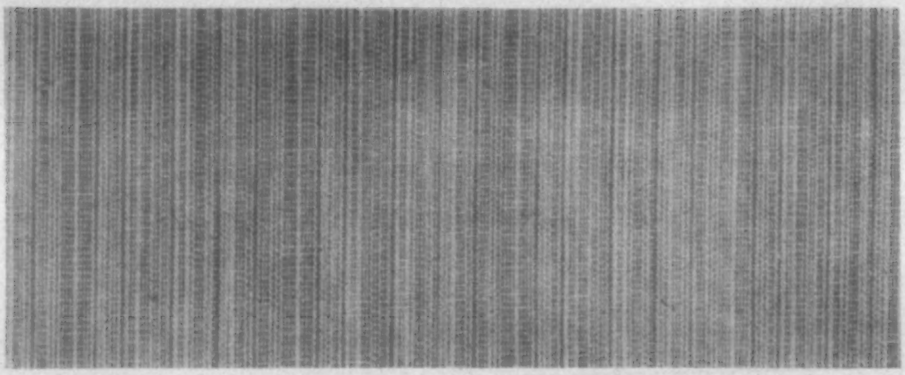
Fig. 1—There are 126 ends in one repeat of this random stripe pattern.

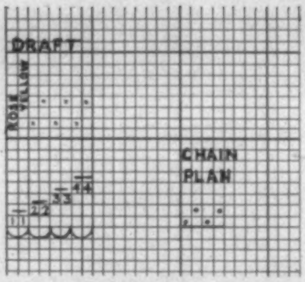
WARP

Patt.																																																		
WHITE		1		1		1		2		2		2		1		1		2		2		2		1		1		3		2		2		1		2		2		1		1		2		3		1		3
BLUE	1		1		1		1		1		1		1		1		1		2		1		1		1		1		1		1		2		1		1		1		1		1		1		1		1	

	2		1		2		1		2		1		1		3		1		3		2		1		2		2		2		2		1		1		1		3	TOTAL = 126
2		1		1		1		1		1		1		1		1		1		2		1		1		1		1		2		1		1		1		1		

Fig. 2—Layout for fabric shown in Fig. 1.





Fabric shown in Fig. 3 *(left)* has only two ends per repeat; Fig. 4 *(above)* is drawing-in draft and dobby chain plan for this pattern.

chain plan used to make this second cloth, which requires a draw similar to that used for oxford shirting. During weaving the two different colored ends in each heddle will occasionally twist over one another and change position in the fabric. Since they both pass through the same dent and heddle, there is nothing to prevent this from happening. Therefore the warp, which was made with an end of one color regularly alternating with an end of the other color, will not maintain its original arrangement. The result will be a random design, but one that can be easily handled by the operatives during warp preparations and weaving.

Waste Is Not A Thing Of Past, But There's Now Less Of It In Fieldcrest Weave Room

"MAKE Haste Against Waste" is the byword of employees at Fieldcrest Mills Inc., Draper, N. C., as evidenced by these pictures from *The Mill Whistle,* Fieldcrest's house organ. For more than a year employees of all shifts have attended meetings where waste control was discussed and where they were asked to make suggestions concerning the waste problem. In addition to the meetings, waste charts have been posted each week showing the department's performance as compared with the standard allowance for various types of controllable waste. Bulletin board posters are used to dramatize the losses which occur when waste is made at various stages of operation.

In commenting on the program, D. A. Purcell, blanket mill superintendent, stated, "In a large operation . . . losses from waste are tremendous. We believe that the employees are coming to realize what better control of waste means from the standjoint of job security for them. We have had excellent co-operation in the program . . ."

E. W. Medbery, production manager, pointing out how waste affects the individual employee, said, "Competition in our industry seems keener today than ever before. Customers are more particular, especially for quality at the best price. Excessive waste increases the selling price of textile products. A penny's difference in the price of an article often helps a customer to decide which brand to buy. Other things being equal, this means that customers buy from the mill that has done the best job of controlling waste.

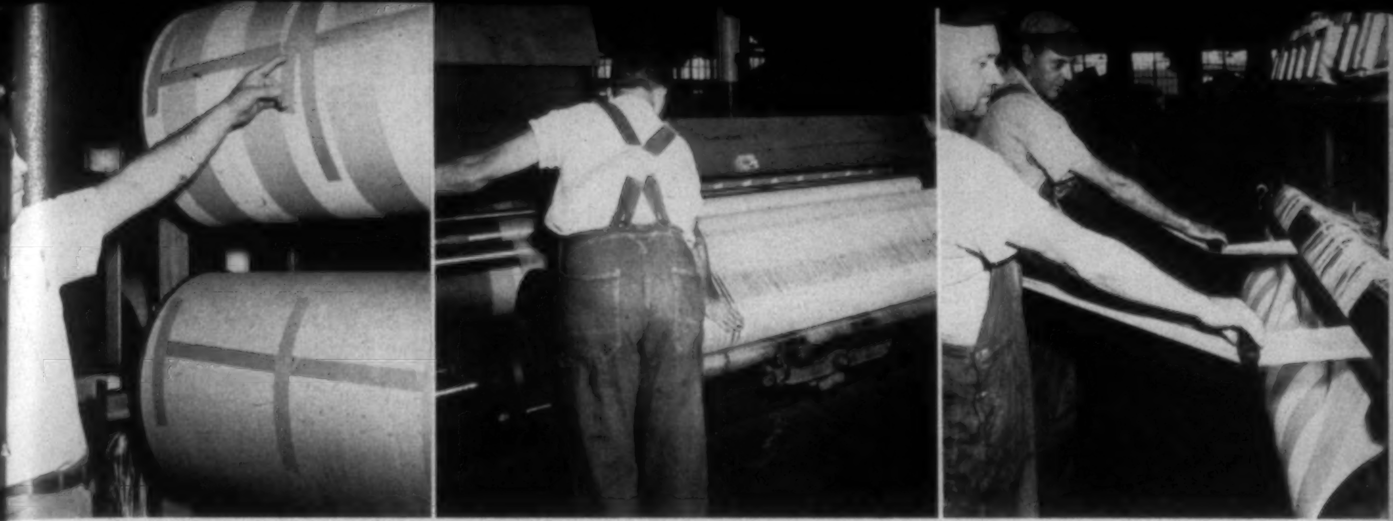
"Unbelievable as it seems, our losses from waste at Fieldcrest Mills total thousands of dollars a day and run into millions of dollars each year. This loss not only affects the company in its competition with other mills—it effects each and every employee's job at Fieldcrest.

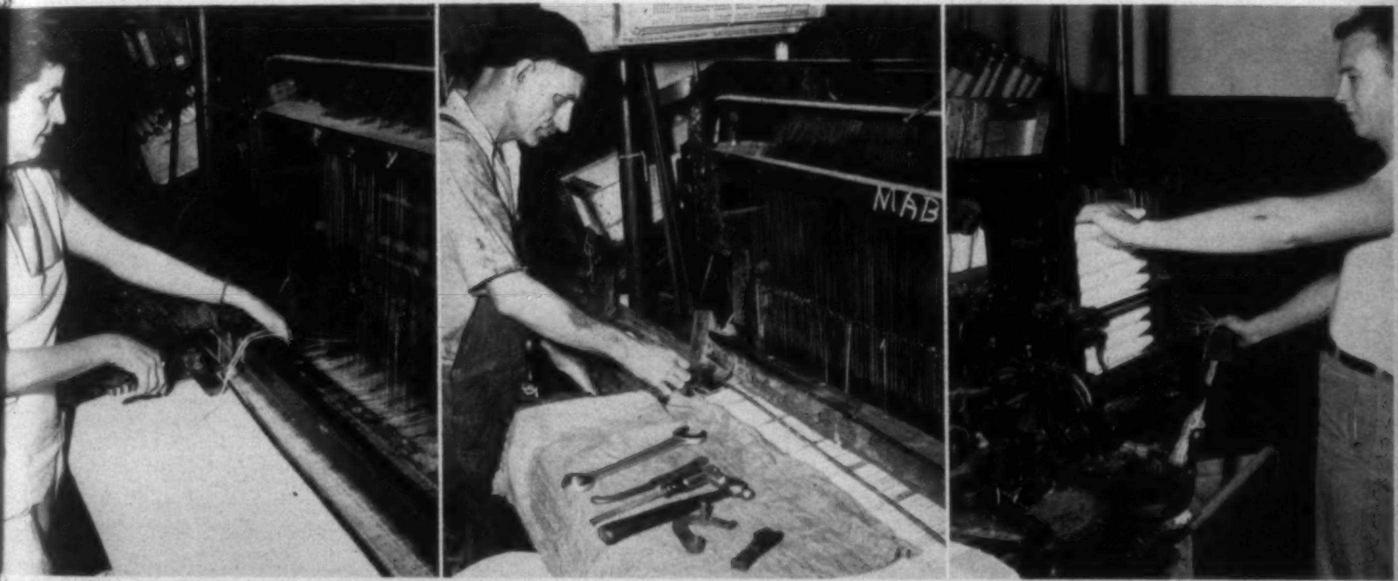
"Losses from waste represent a sizeable part of the cost of making textiles. This extra cost affects the company's ability to provide regular work, good pay, employee benefits, good working conditions. Job security is very closely tied in with this matter of waste control. When employees, through greater care, are able to turn this loss into a savings, they profit by steadier work and the savings indirectly get back into the pockets of the employees.

"Not all waste is preventable. A certain amount accompanies many processes and waste sometimes is intentionally removed to improve the quality of the product. However, when good stock is unnecessarily removed during a process, then a needless loss occurs. Even if this waste is reworked, the labor and burden costs, up to the point of removal, are lost. Furthermore, too great a quantity of reworkable waste added to regular stock can bring a host of troubles and extra expense.

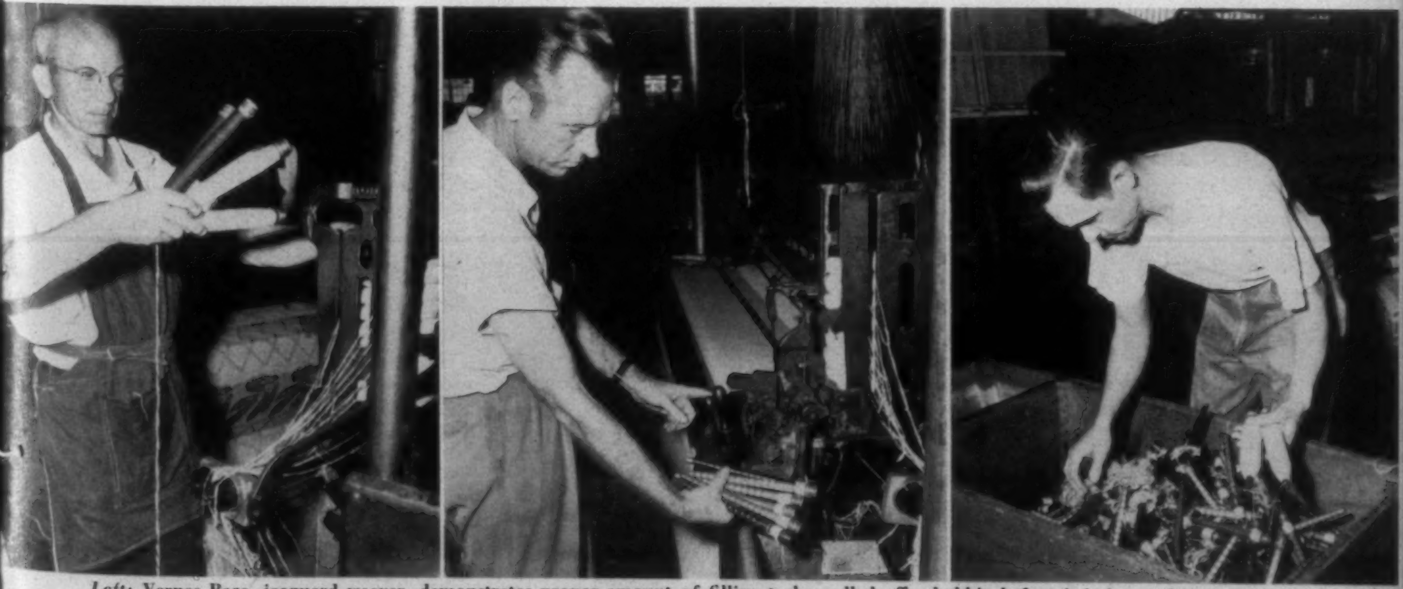
"Under our waste control program last year, outstanding results were achieved in many departments and mills. With continued efforts and sincere interest on the part of all employees and supervisors we can continue to reduce our waste and lower our losses from this source."

Pictures at right show what is being done about waste in the blanket plant. The waste control program is also in effect in the bedspread, bleachery, hosiery, Karastan, sheeting and towel mills. It is being installed in the company's finishing mill and synthetic fabrics mill.


Left: J. O. Shorter points to tape holding outside ends in place. Warps are kept off floor in these racks to avoid stacking them on one another and incurring yarn damage. *Center:* Lester Amburn shows proper start-up on slasher. Ends are taped so loom will run warp down to the beam. *Right:* Neal Thomas and Robert Woodall, using minimum of yarn, comb up and lease out a bottom warp. If this is not done carefully, the warp will not run out and job must be done again.



Left: Lily Williams, smash hand, reduces waste by tying in small breakout rather than pulling warp over. *Center:* Daniel Overby, loom fixer, places cloth over goods while working on loom, thus preventing soilage to newly-woven blanket fabric. *Right:* Gorman Stevens, jacquard weaver, shows how magazine should be filled to proper level. If too full, bobbins can fall to floor.


Left: Vernes Pace, jacquard weaver, demonstrates proper amount of filling to be pulled off a bobbin before it is inserted in magazine. *Center:* Garland Samuels makes frequent checks on knock-outs in quill can. When run down to bunch, waste is kept to a minimum. *Right:* Louie Durham picks out good bobbins from the quill box and returns them to loom. This keeps good filling from being stripped off as waste.

Bleaching, Dyeing & Finishing

Carrying Developmental Work Through To Plant Vat Dyeing Procedures

By F. O. STONE

In this series the author will attempt to show how various dyeing methods undergo various changes from the developmental or experimental stage as they are placed on plant production procedures. These transitional methods will be described without great detail and only short technical references will be made to the process involved. Due to the increasing application of vat dyes by the vat-acid method, this phase of vat dye application will be first discussed.

THE evaluation of the vat-acid process has come about gradually since U. S. Army and civilian technical observers first reported on the German Kupensaure process after World War II. Their report was based on information gathered from the files of the German dyestuff cartel confiscated at the end of the war.

The vat-acid dispersions of vat dyes are colloidal in nature which make them comparable to vat dye pigments. Being colloidal in nature the initial work on the application of vat-acid naturally has tended toward similar vat dyeing procedures where vat pigment dyes have been applied or show potentialities.

The production of vat-acid dispersion (colloidal solutions) is brought about by the reduction of the vat dyes by standard methods using high concentrations of caustic soda and sodium hydrosulfite. Then this alkaline (sodium leuco) reduction is neutralized and acidified with Acetic Acid or some other organic acid in the presence of an acid-resistant dispersing compound. The leuco vat dye is completely precipitated as a finely dispersed vat acid-vat compound. In this vat-acid form these compounds show no pick-up affinity for cellulosic fibers (cotton, viscose rayon, etc.) such as a sodium leuco form of a vat dye possesses. These vat acid dispersions of the vat dyes must be applied to cellulosic fibers then be treated with alkaline reduction (caustic soda and sodium hydrosulfite) to obtain the vat shades required. In the production of vat-acid dispersions of vat dyes, the sodium portion of the sodium leuco vat reduction is replaced with hydrogen.

The initial experimental work carried out on a small scale from translation of German notes gave the following workable methods.

Chemicals Used (All chemicals calculated on weight of vat dyestuff pastes required for shades)—

25.00% Caustic Soda Flake
25.00% Sodium Hydrosulfite Powder
Based on weight of vat dye paste required.
1 Pint Acetic Acid (56%) to neutralize and acidify

Per 100-gallon mix

Pastel to light medium shades use:
4.25 lb. Blancol (Sodium Naptholenate)

Medium to heavy shades use:
4.5-18 lb. Blancol
1.2-2.4 lb. Nekal BX

The amount of chemicals required for 100-gallon mix would be:
2½-3 lb. Caustic Flake
2½-3 lb. Hydrosulfite Powder
8.5-9¼ pts. Acetic (56%)

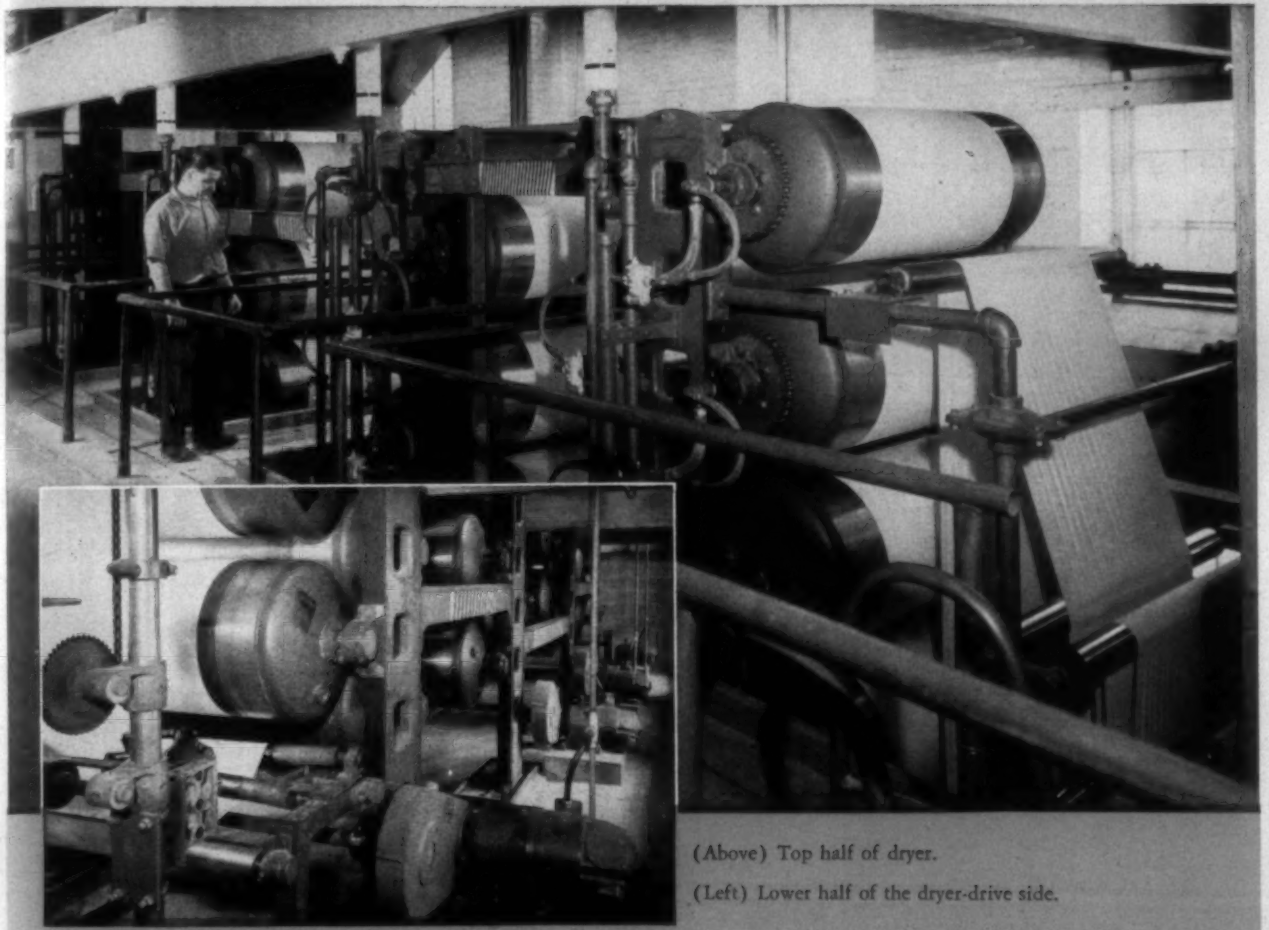
The detergents (Blancol and Nekal BX) being calculated on shade strength can be maintained at:
4.5 lb. Blancol Acid
1.75-2 lb. Nekal BX
Per 100-gallon mix.

Preparation of Vat-Acid Dispersions—(1) Add the vat paste to tank at 140° F. (this was found to be an average temperature to use on experimental work) volume brought up, then caustic and hydrosulfite added slowly with thorough stirring. Allow to stand 15-20 minutes. Stir only when dye and chemicals are being added to insure thorough solution. (2) After the standing period enter the Blancol (dissolved prior to adding) and stir slowly until mixed thoroughly. (3) Enter Acetic Acid (diluted five to ten times) with stirring. Then enter Nekal BX (dissolved) and the vat acid is ready for the dyeing operation to be carried out.

Pad-Jig Dyeing—Piece goods are padded at 140-180 y.p.m. using nip-pad instead of the immersion pad which tended to give blotch or scum spots on padded goods. The padded goods are run directly into a prepared alkaline reduction bath in jig (caustic and hydro). The shade is usually obtained in two to four ends as compared to four to six ends required on regular vat pigment procedures.

It was observed that the acid leuco condition of vat changes rapidly to the sodium leuco when entering the alkaline reduction jig bath.

Many shades that are troublesome from a dye specking viewpoint can be run free of dye specks by the vat-acid



(Above) Top half of dryer.

(Left) Lower half of the dryer-drive side.

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process. Certain styles of rayon, such as challis, that are difficult to penetrate, and the high count cottons are vastly improved in appearance when dyed by the vat acid method rather than by the conventional pigment padding method. Further, the so-called affinity stains, so prevalent in much kier work, do not show on goods run by the vat-acid method. For these and other reasons the vat-acid dyeing technique continues to grow in popularity.

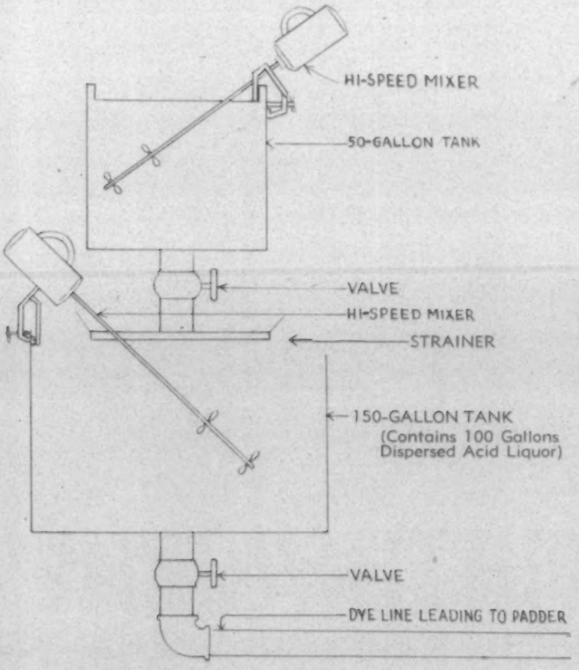
Vat-acid dispersions are colloidal in nature and are produced by neutralizing the alkaline vat with acetic acid, thereby substituting hydrogen for sodium. The acid leucos have slight substantial affinity for cellulosic goods and henceforth can be mechanically distributed throughout a fiber without interference by chemical affinity.

The two methods of preparing the hydrogen-leuco dispersions are currently used by the dyer. In one method the acetic acid is added to the sodium leuco and in the other the sodium leuco is added to the acid. The latter method is more practical because the acid leuco takes place at once and because of the larger volume a perfect balance occurs without benefit of a great deal of technical assistance.

The following is a process for the preparation of a vat-acid. The method is in two steps; first, the vat color is reduced wih hydrosulphite and caustic soda in the presence of a dispersing agent, and secondly, the sodium leuco is converted to the acid leuco with acetic acid again in the presence of a dispersing agent.

In making up the acid leuco the vat dyes are reduced in a stock vat which is preferably one-third the total final padding volume. This reduced solution is then strained into the remainder of the required total volume which contains the necessary amount of acetic acid and dispersing agent. The reduced solution is thoroughly stirred during the straining operation.

A schematic drawing of the equipment used in preparing the vat acid is herewith shown.



The stock vat should be reduced with two ounces per gallon each of caustic soda and hydrosulphite. As a general rule not over 12 ounces of vat color paste per gallon of liquor should be used. This is a happy medium figure and is deduced from a chart showing the various solubilities of vat dyes. A good solution in the stock vat is essential to a good dispersion in the acid leuco. Various synthetic detergents and the sodium salt of the condensation product of a Naphthalenesulfonic acid, sold under various trade names, are quite effective for this purpose.

Blancol Concentrated Powder (General Dyestuff Corp.) has become popular as a dispersing agent. For light shades seven pounds of Blancol to each 150 gallons of pad liquor are used. For light-medium shades 14 pounds of Blancol to each 150 gallons of pad liquor are used. For medium (maximum vat-acid concentrations) shades, 21 pounds of Blancol are used. The acetic acid necessary will be five pints of 56 per cent of acetic acid for each pound of dry caustic used in the reduction bath.

A typical formula for a mix of 150 gallons would be as follows:

STOCK VAT REDUCTION

50 Gallons at 120° F.

2.00 oz./gal. Caustic Soda (dry)	6 lbs. 4 ozs.
2.00 oz./gal. Hydrosulphite	6 lbs. 4 ozs.
Dye	X lbs. (not to exceed 36 lbs.)
Blancol	7 lbs. (0-12 lbs. of color) 14 lbs. (12-24 lbs. of color) 21 lbs. (24-36 lbs. of color)

The hydrosulphite is added last to the above mix slowly and with the high speed mixer running. The mix is then allowed to reduce from five to ten minutes and then strained while stirring into the acid bath.

ACID BATH

100 Gallons of water at 120° F. containing

Acetic Acid 56%	32 pints
Blancol (dissolved)	3 lbs.

The final mix should be at a pH of 4.5 to 5.5

This procedure has been found to give excellent results in practice on piece goods. The dye bath has proven to be of good stability and the quality of the dispersion of the acid leuco has been satisfactory. The method is advantageous because of its simplicity and because the limiting solubility of the alkaline vat leucos has been taken into consideration to give one practical formula.

The acid leuco thus produced is padded on the goods in the same regular manner as for ordinary vat pigment work. From this point on the goods may be developed with caustic soda and hydrosulphite, again in the ordinary ways, that is, either on the jig as regular pad jig work, continuous chemical pad-steam, or by the continuous pigment method either wet or dry such as you now run in your plant.

It has been found that, if the goods are dipped at the pad, scum stains will result. It is better, therefore, on vat acid runs, to nip pad.

Pigment padded goods are normally run down directly into hydro and caustic on the jig. In the case of ordinary vats they receive four more ends in dye after the initial run down. With vat-acid goods a nice job is effected with only two ends on the jig after the run down. This, of course, effects a saving of time and chemicals.

Care must be taken when straining the reduced alkaline solution into the acid solution that the oxidized foam on top of the reduced solution does not get into the acid bath as it may be apt to give difficulty with undispersed particles. After the acid leuco has been formed the foam on top of that bath is readily redispersible with stirring and should cause no trouble.

It is important that the goods to be padded should be as free from alkali as possible. If not alkali-free the solution gradually becomes alkaline in the pad box and the acid leuco is transformed into the sodium leuco.

It is not necessary to agitate the pad liquor except when the dyestuff and chemicals are being added and possibly for a minute or two afterward. Temperature of the reduced dye and acid tank must be similar. *(To be continued)*.

Finishers Set Up Standards For Synthetics

The Silk & Rayon Printers & Dyers Association of America Inc., after more than a year's research, has drawn up a point system for grading the dyeing and finishing of synthetic fabrics. The suggested standards, similar to the system of rules for classifying cotton gray goods or wool goods, specify dye defects to be considered in making allowances in settling disputes over the quality of dyeing and finishing. The point system has been tried in the field and ratings have been found to correlate closely with the opinions of experts examining the same fabric.

The association points out that the rules are an attempt to put in practical terms what constitutes practical synthetic or blended piece goods for use in garments without making the classification so severe as to be unworkable. In drawing up the rules, the association consulted a number of leading concerns in the field. Dean M. Lewis, Colonial Piece Dye Works, association president, has stated, "It is firmly believed that usage by the industry of these standards will go a long way toward eliminating the confusion usually present in grading finished goods preparatory to the appraisal and adjustment of claims."

While the dyers and printers promulgated their new standards, the Consumer Goods Standards Board of the American Standards Association approved the scope of a new project for minimum requirements for all textiles. The National Retail Dry Goods Association will sponsor the project. The project is designed to lift the qualities of all textile products.

Southeastern A.A.T.C.C. Holds Spring Meeting

The Spring meeting of the Southeastern Section of the A.A.T.C.C. was held on March 27 at the Ralston Hotel in Columbus, Ga. The meeting featured an open forum on "The Application of Vat and Direct Dyes" conducted by R. B. Hallowell, Clark Thread Co., Albany, Ga. A panel of six speakers spoke on the subject. Panel members were Frank Cooper Jr., A. & M. Karagheusian, Albany, Ga.; Jim Stradley, Du Pont, Atlanta, Ga.; Robert H. Harris, Spalding Knitting Mills, Griffin, Ga.; Howard McCamy, Pepperell Mfg. Co., Lindale, Ga.; Bob Nuttall, American Aniline Products Inc., Charlotte, N. C.; and Boyce C. Bond, Pittsburgh Coke & Chemical Co., Pittsburgh, Pa. Tracey Davis, Massachusetts Life Insurance Co., appeared as guest speaker.

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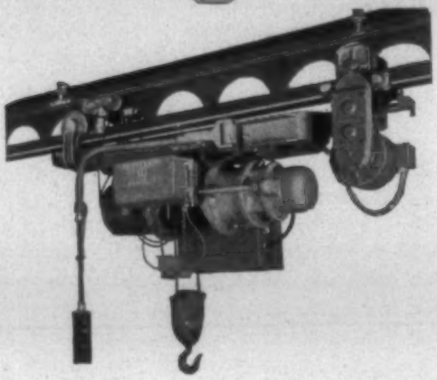

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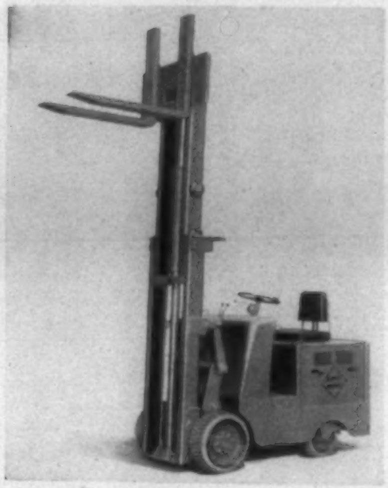

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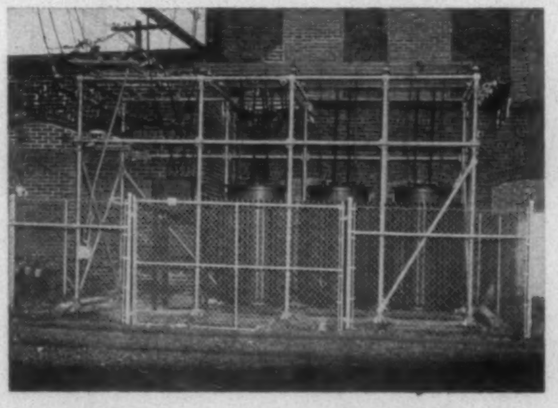

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How Trailability Determines Aisle Usage For Tractor-Trailer Units

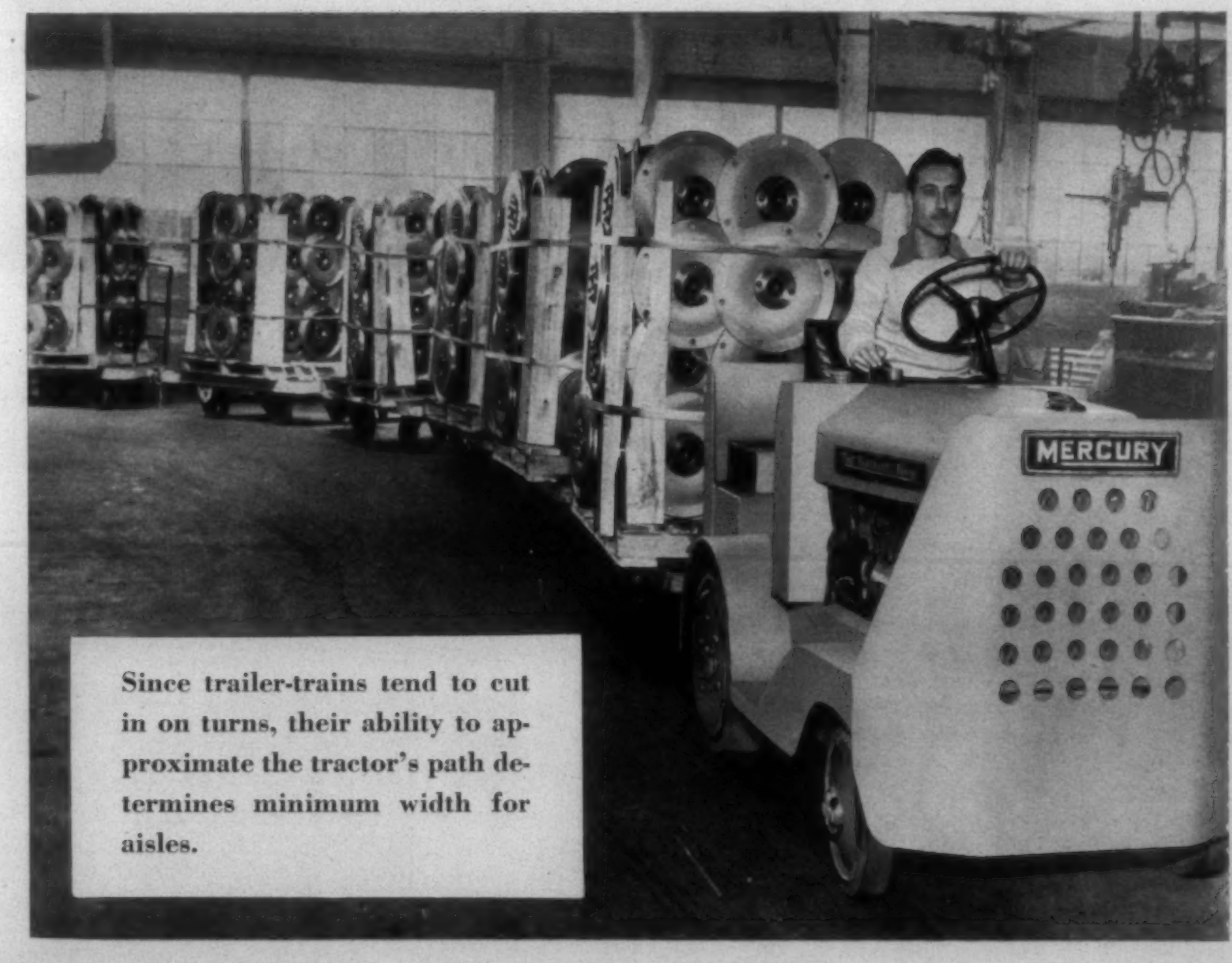
ONE of the major factors determining the minimum aisle widths necessary for an in-plant tractor-trailer system is the ability of the train of trailers to approximate the initial path of the tractor. This trailability depends mainly upon the relative positions of the fixed wheels of the trailer and the articulate points of the couplers.

There are three basic types of industrial trailers. Each gets its name from the wheel suspension used to steer it and each trails relatively effectively. The types are: the caster-wheel steer trailer, the fifth-wheel steer trailer, and the four-wheel steer trailer.

The caster-wheel steer trailer, developed from the caster-wheel hand truck, consists of a platform mounted on four wheels. Its front wheels are mounted in swivel caster assemblies. Rear wheels are mounted on a fixed axle and are usually larger than the caster wheels. They carry the bulk of the load.

The caster-wheel trailer turns by swiveling on its front caster wheels and pivoting about a vertical axis whose location changes from a position midway between the fixed rear wheels, as when the trailer is turned by hand, to a position along the centerline of the fixed axle where it is coincident with the instantaneous center, as when it tracks or trails at the minimum turning radius of the train.

Caster-wheel steer trailers are moved easily by hand and can be turned in very confined spaces. In addition, a train



Since trailer-trains tend to cut in on turns, their ability to approximate the tractor's path determines minimum width for aisles.

made up of these trailers will trail highly accurately. For all-purpose work, the caster-wheel trailer is probably superior to any other.

The second kind of trailer, the fifth-wheel steer type, generally has four equal-sized wheels. Its front steering wheels are attached to the platform by a wagon-type fifth wheel. These trailers steer in the same manner as a farm wagon or a dray wagon and are modifications of this type of vehicle. The fifth-wheel trailer is particularly well suited for heavy loads and the hardest of service.

However, a train of these trailers will not trail as accurately as a train of caster-wheel trailers and is not reversible. In addition, fifth-wheel steer trailers are hard to turn by hand in confined places. They are difficult to back up with a tractor because double pivot points are involved. A special application of the fifth-wheel steering mechanism to both ends of the trailer (double fifth-wheel) makes this type trailer reversible.

The third type of trailer, the four-wheel steer trailer, has all four wheels arranged to steer simultaneously. This type of trailer is often a further adaptation of a double fifth-wheel type, namely, two fifth-wheel steering assemblies connected by cross bars. In some designs four-wheel steering is accomplished through use of knuckle mounted wheels.

Four-wheel steer trailers are excellent where accurate trailing is absolutely essential. However, they are extremely difficult to maneuver by hand and require considerable space in which to turn. For these reasons they are used rarely.

The relative positions of the fixed wheels and the articulate points of the couplers determine the ability of the trailer to approximate the initial path of the tractor. An analysis of the steering action of the caster-wheel trailer, as a typical consideration, will illustrate the relationship between wheel position and trailability.

If the positive or fixed wheels of a hypothetical trailer of this type are located midway between the articulate points of the couplers, the trailer will move in such a manner that every articulate point will follow the path of the turning arc and will always be equally distant from the theoretical vertical axis running through the middle of the fixed axle. In theory, a trailer constructed in this manner will trail perfectly. However, a trailer with its fixed axle in the middle is susceptible to whipping actions caused by the normal side motions of the tractor.

This tendency to whip is easily understood if we consider the trailer as a lever pivoted at its middle and taking alternate thrusts at its front end from the right and left. It can be seen that any force transmitted by the tractor to the front coupler of the trailer will be transmitted in equal magnitude by the rear coupler to the next trailer. In other words, there is a one-to-one ratio between the two forces because their lever-arm distance is equal.

Moving the fixed wheels forward would tend to magnify the transmitted forces. For example, any side motion transmitted from the tractor to the front trailer coupler would be transmitted by the rear trailer coupler to the next trailer and magnified by the ratio of the rear lever distance to the front lever distance of the trailer. Therefore, the ideal solution—one that will inhibit rather than induce whipping—would be to move the fixed axle rearward so that any transmitted side motion would be diminished rather than magnified.

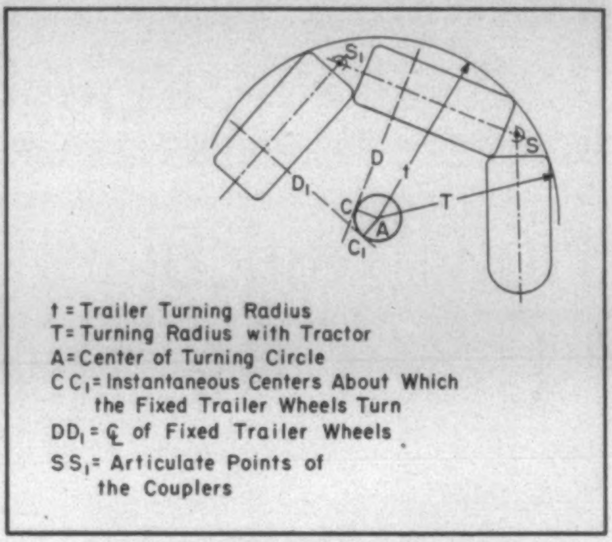

S₁
S
D
t
D₁
C
A
T
C₁
t = Trailer Turning Radius
T = Turning Radius with Tractor
A = Center of Turning Circle
C C₁ = Instantaneous Centers About Which the Fixed Trailer Wheels Turn
DD₁ = ℄ of Fixed Trailer Wheels
S S₁ = Articulate Points of the Couplers

Fig. 1—Caster-wheel trailers turn on instantaneous centers determined by the location of the fixed axle.

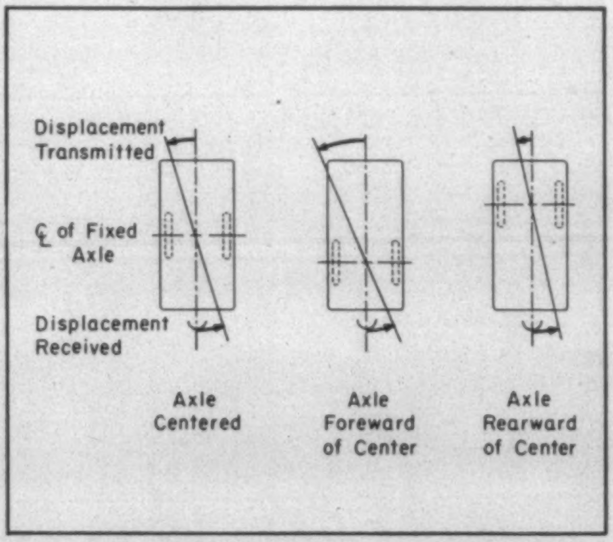
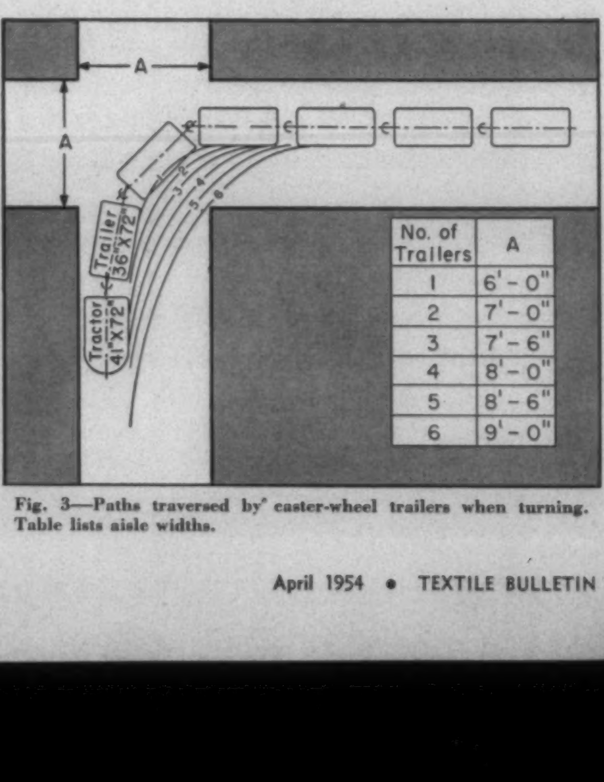


Fig. 2—Drawing shows how location of the fixed axle influences the magnitude of trailer whipping.



No. of Trailers	A
1	6'-0"
2	7'-0"
3	7'-6"
4	8'-0"
5	8'-6"
6	9'-0"

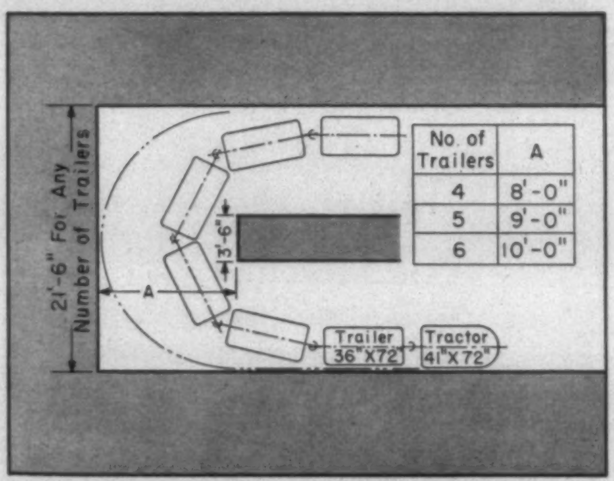
Fig. 3—Paths traversed by caster-wheel trailers when turning. Table lists aisle widths.

Unfortunately, any gain in the trailer's ability to counteract whipping is accomplished at the expense of trailability. Because the centerline of the fixed axle no longer passes through the center point of the turning arc, the train made up of trailers whose fixed axles are located to the rear of the center of the platform will not follow the curve accurately.

These trailers cut in a trifle as they trail and have separate paths and separate pivot points. Thus, the turning path, formerly a circle now resembles a parabola, and the pivot point is now an instantaneous center.

Naturally, with this constant trailing error or deviation, the extra aisle width needed for turning is further determined by the number of trailers in the train—the longer the train, the wider must be the aisle dimensions. A train of five to six trailers has been found to offer optimum load-carrying capacities without requiring uneconomically large aisle widths. In addition, aisles and corridors are not seriously tied up as they would be if 20 to 25 trailers are used (as in some railroad warehouse installations).

Experience has shown that reasonably accurate trailing without whipping can be achieved if the fixed wheels are located approximately one-third of the deck length from the rear of the trailer. The location of the free-swiveling casters has no bearing whatsoever on the trailing of the vehicle and little or no effect on the whipping. However, their location does affect the gradability and stability of the trailer. If the king pins of the swivel casters are located approximately one-sixth of the deck length from the front of the trailer, gradability and stability will be good.



No. of Trailers	A
4	8'-0"
5	9'-0"
6	10'-0"

Fig. 4—Minimum distance from wall required by caster-wheel trailers making a 180° turn.

With the fixed and caster wheels in the positions indicated, the rear wheels will carry approximately two-thirds of the load while the caster wheels will carry the remaining one-third. This is one of the reasons why the caster wheels are smaller than the fixed wheels.

The one-third and one-sixth deck-length proportions are easily maintained on trailers up to nine feet in length. However, for longer trailers, these proportions are necessarily deviated from to favor grade clearance and to avoid highly-concentrated frame stresses. Stake pocket interference and special trailer applications are other reasons for deviating from the optimum proportions.

Because industrial trailers are designed to effect a compromise between trailability and whipping, their turning points — instantaneous centers with constantly-changing paths—are difficult to lay out on paper. Therefore, tests run on actual equipment, or scale models, offer the quickest, easiest and most accurate methods for determining tracking paths and aisle-width dimensions.

Assume a 41 x 72-inch three-wheel, short-turning radius tractor is towing a train of six 36 x 72-inch caster-wheel trailers through 90° and 180° turns. Tabular values give: (A) the necessary aisle-width dimensions (with sufficient clearance) for trains from one to six trailers turning through a right-angle turn, and (B) the minimum distances that trains of four, five, and six trailers must be from the end wall when making a U-shaped turn.

Beyond a certain number of trailers, aisle-width dimensions for all practical purposes remain the same. For example, the results of this test showed that an over-all dimension of 21½ feet is sufficient for any number of trailers. The reason for this is that after a certain number of trailer turns, the maximum turning angle of the trailer couplers is reached and the remaining vehicles in the train—instead of following a constantly-deviating path—now follow a relatively fixed path.

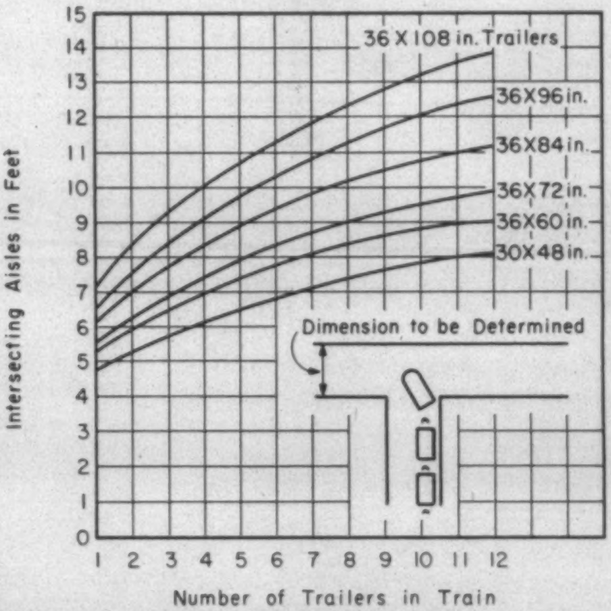


Fig. 5—To ascertain minimum intersecting aisle sizes: (a) find the number of trailers in the train on the abscissa of the graph; (b) follow the vertical line upward to the curve of the correct trailer size; and (c) follow the horizontal line across the ordinate of the graph where the values for insecting aisle widths are given in feet. To this value add approximately one foot for clearance.

Curves compiled by manufacturers of tractor-trailer systems are useful in determining aisle-width dimensions when trailer sizes and wheel suspensions are known. The curves in Fig. 5 give the recommended minimum intersecting aisle-width dimensions for trains of caster-wheel trailers, equipped with safety self-couplers, whose fixed axles are one-third of the deck length from the rear of each trailer. For example, a train of eight 36 x 96-inch trailers would require approximately 11½-feet aisle widths. Allowing for proper clearance for this train, we add one foot which makes the recommended dimension 12½ feet. To find aisles for trailer widths not shown, find intersecting aisles for trailers of same length and add or subtract the difference in width.

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PERSONAL NEWS

L. Gordan Hale, secretary of Duplan Corp., has retired after 36 years with the company, and has been succeeded by John E. Clark. Mr. Hale was named assistant secretary in 1938 and secretary in 1946. Mr. Clark, assistant secretary since October 1953, joined the firm in April 1951. . . . William A. Wood Jr. has been appointed Southern sales manager of the throwing operation. Mr. Wood will be located at the sales office in Greensboro, N. C., and will be in charge of the Chattanooga, Tenn., office also.

A. B. Edge Jr.

Arthur B. Edge Jr., president of Callaway Mills Co., LaGrange, Ga., was honored by the Newcomen Society in North America recently at a special meeting held in Atlanta. Mr. Edge is vice-chairman of the Georgia Committee of Newcomen.

Henry Papini was recently appointed executive vice-president of Metro-Atlantic Inc. Mr. Papini, formerly vice-president of the company, will make Greenville, S. C., his headquarters. Metro has also announced that plans are being made for the construction of a manufacturing plant in the South and for expansion of the main Metro plant in Centredale, R. I.

George H. Coates has retired after 45 years of service with Fulton Bag & Cotton Mills, Atlanta, Ga. A native of Worcestershire, England, Mr. Coates came to this country in 1897. From 1909 to 1939 he served as superintendent of the bleachery and finishing plant at Fulton. He has been with the sales division of the company since 1939.

H. K. Hallett

H. K. Hallett of Charlotte, N. C., and William O. Forssell of Walpole, Mass., have been elected vice-presidents of the Kendall Mills. Mr. Forssell was also named a director of the company and Mr. Hallett, a director since 1946, was re-elected. Both have been divisional managers with the company for a number of years—Mr. Hallett at Charlotte and Mr. Forssell at Walpole. At the same meeting M. L. Clemence was elected treasurer of the company. He has been assistant to the president and assistant treasurer since 1948. Traditionally the president of the company has been treasurer.

G. A. Berkstresser, manager and vice-president of Rosemary Mfg. Co., Roanoke Rapids, has been named "North Carolina Textile Man of the Year" by Phi Psi Fraternity of North Carolina State College. Mr. Berkstresser is also vice-president of Roanoke Mills Co.; vice-president of Patterson Mills Co.; a board member of George Brasfield Co.; and a director of the North Carolina Textile Manufacturers Association. He was formerly with Simmons Textile Co. and Haywood, Mackey & Valentine, consultants. The award, given annually to the man in North Carolina who has contributed most to the textile industry in the state, will be presented the first week in May.

J. D. Sandridge retired as assistant manager of the organic chemicals department of E. I. du Pont de Nemours & Co. Inc., Charlotte, N. C., on April 1, after 35 years with the company. Mr. Sandridge, who has been assistant manager of the organic chemicals department since 1936, has been succeeded by Hyman Field.

Joachim Koegler

Joachim Koegler, a member of the firm of Reiner-Famatex Inc., of Weehawken, N. J., will be present at the Reiner company booths at Atlantic City to explain the working model of the Famatex tenter frame with a combination of clips and pins.

John M. McAlpine has been appointed safety engineer at the Celriver Plant of the Celanese Corp. of America, Rock Hill, S. C. He succeeds William R. Hollingsworth, who has resigned after a service of several years. Mr. McAlpine was formerly safety engineer of the Amcelle Plant of Celanese at Cumberland, Md.

Appointment of Virgil C. McQuiddy to the post of sales manager for all yarns manufactured by the textile division, United States Rubber Co., was announced recently. Mr. McQuiddy joined U. S. Rubber in 1941 at the Hogansville, Ga., plant, and has been located at the New York general offices since 1942, except for two years when he served as manager of the yarn sales office in Reading, Pa. Prior to his promotion, he was sales manager of carded and combed yarns as well as certain synthetic yarns and industrial fabrics. . . . Joseph B. Jackson has been appointed assistant sales manager, reporting to Mr. McQuiddy. Mr. Jackson started with U. S. Rubber in 1933 at the Hogansville plant. He has served as manager of the firm's yarn sales offices in Gastonia, N. C., and Reading, Pa. . . . R. J. Keane, who started with the textile division as a salesman in 1947, will succeed Mr. Jackson as head of the Reading office. The Reading area has been broadened to cover parts of New York State as well as Pennsylvania. Mr. Keane has been manager of yarn sales offices in Gastonia, N. C., and Springfield, Mass.

Jesse A. White

J. A. White, vice-president of J. P. Stevens & Co., has been named general manager of the Republic Cotton Mills division at Great Falls, S. C. Carl A. Johnson was named assistant general manager in charge of manufacturing for Great Falls operations.

R. A. Liner, assistant superintendent of Greenwood Mills' Durst Plant, has been named assistant superintendent of the company's Ninety-Six Plant. He is being succeeded by R. M. Yonce, formerly overseer of weaving at the company's Mathews Plant. Mr. Liner will take the place at Ninety-Six formerly held by A. L. Strawn, who became superintendent of the plant when J. G. McNeil retired. . . . Other promotions in the Greenwood organization included that of Averit E. Saylors from assistant overseer of weaving to overseer of weaving at Mathews and Inman Howard from loom fixer to second hand at Mathews.

Carl M. Thomas

Carl M. Thomas has joined the sales engineering staff of Fafnir Bearing Co. at the company's Charlotte, N. C., office. Formerly with the Link-Belt Co., Mr. Thomas will serve the Carolinas, where Mr. Berg has represented Fafnir for many years.

J. A. Kempfer has been named superintendent of Wortendyke Mfg. Co., Waynesboro, Va., a branch of Camp Mfg. Co., succeeding A. B. Moss, vice-president and resident manager of the plant, who has resigned. Mr. Kempfer was formerly with the Duplan Corp. and Burlington Mills. He is a native of Pennsylvania.

Harry L. Dalton, vice-president in charge of sales and public relations of American Viscose Corp., Philadelphia, and Frederick H. Schloss, secretary and treasurer of Darlington Fabrics Corp., New York, have been elected trustees of the Philadelphia Textile Institute. Mr. Dalton, a director of the American Viscose Corp., is a director of the Greater Philadelphia Chamber of Commerce, a trustee and on the executive committee of the Textile Research Institute, Princeton, N. J., and a member of the finance committee of Queens College, Charlotte, N. C. Mr. Schloss, a graduate of P.T.I., is a former director of Woodmere Academy and the Hospital for Joint Diseases in New York, and has served for many years on the board of governors of P.T.I.

Carl Baker

W. D. Dodenhoff Co. has announced the appointment of Carl Baker as sales manager, industrial supply division, with headquarters at the company's home office in Greenville, S. C. Mr. Baker formerly was with Sullivan Hardware Co. and Goodyear.

Walter F. Wolfe, president of Franklin Process Co., has moved his headquarters from Philadelphia to Providence, R. I. He will continue to spend considerable time at the Philadelphia office and other plants of the company.

James T. Doughtie, manager of Arkansas Cotton Mills, has been elected president of the Morrillton, Ark., Rotary Club.

W. R. Muller

William R. Muller has been elected a vice-president of The Bullard Clark Co. Mr. Muller will be in charge of all textile sales of the Northern and Southern divisions of the company and will maintain his headquarters at Danielson, Conn.

Marshall E. Lake, manager of the mill power department for Duke Power Co., Charlotte, N. C., has been elected a vice-president of the firm. Mr. Lake has been with Duke Power since his graduation from college, has served as chairman of the North Carolina Section of the American Institute of Electrical Engineers, president of the Charlotte Engineers Club and a director of the North Carolina Society of Engineers.

United States Rubber Co. has announced the appointment of Louis M. Boulware as assistant production manager of the company's textile division. Formerly plant manager of the company's Fisk Cord Mills, New Bedford, Mass., Mr. Boulware will be in charge of production at the textile division plants in Scottsville, Va., Gastonia, N. C., Hogansville, Ga., Shelbyville, Tenn., and Winnsboro, S. C. He will make his headquarters at Winnsboro.

ARMSTRONG SALES MEETING—As part of a three-day sales meeting of the industrial division of Armstrong Cork Co. at Lancaster, Pa., March 10-12, field representatives saw an exhibit *(above)* of more than 250 uses of Armstrong's products in industry. Views on the economic outlook for the year ahead in such industries as textiles, automobiles, and shoes were given by Walter E. Hoadley Jr., economist and manager of commercial research; W. B. Tucker, general sales manager; and E. C. Frazier, manager of the sales research department.

Norton C. Foster

Dow Corning Corp. has announced the appointment of Norton C. Foster as manager of the company's newly created textile industry sales division at New York City. Mr. Foster, formerly with the Owens-Illinois Glass Co., joined Dow in 1948.

Hugh Lyle Jones has been transferred from the Bristol (Tenn.) Mills division of American Thread Co. to the Sevier, N. C., plant in the capacity of winding room supervisor. Mr. Jones has been with American Thread since 1949.

Charles L. Paine, executive vice-president of Courtaulds Inc., was recently married to Mrs. Margaret Simendinger Harker, at Bronxville, N. Y.

J. Robert Durham Sr. has been elected president and treasurer of Hanes Dye & Finishing Co., Winston-Salem, N. C., succeeding Ralph P. Hanes, who has moved to the newly-created position of chairman. Mr. Durham, formerly executive vice-president, joined Hanes in 1939, coming from Hartsville Finishing Co. . . . Wellington Dunford has been elected to the newly-created job of controller; John F. Tesh has been named sales manager in charge of the New

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York office, succeeding R. O. Bondurant, who retired at the end of 1953; James G. Hanes has been elected vice-president; J. Robert Durham Jr., secretary; Joel A. Weston, plant manager; and Paul N. Wood, plant superintendent. Mr. Weston was also elected a director, succeeding Thurmond Chatham, who resigned because his duties as U. C. Congressman keeps him out of the city. Directors re-elected include Ralph P. Hanes, Robert M. Hanes, James G. Hanes, James N. Weeks, J. Robert Durham Sr., and Herman A. Jolitz.

M. L. Fillippeli Jr.

M. L. Fillippeli Jr. has joined the technical sales staff of Emkay Chemical Co. at the company's Greensboro, N. C., sales office. A graduate of North Carolina State College, Mr. Fillippeli was formerly with Burlington Mills and Onyx Oil & Chemical.

T. Nash Broaddus has been appointed assistant manager of the fabric development group of Du Pont's textile fibers department. Mr. Broaddus, formerly area supervisor at the company's nylon plant at Martinsville, Va., will make his headquarters in New York City.

Goodyear Tire & Rubber Co. has announced the appointments of R. E. Workman as assistant to the general manager of the chemical division; C. O. McNeer as general sales manager; and M. J. Rhoad as assistant to the general sales manager. Mr. Workman will assist in the co-ordination of the research, development, production and sales phases of the chemical division. Mr. McNeer will be in charge of all phases of selling chemical materials to textile industries.

J. A. Dickson

J. A. Dickson has been appointed district manager of the southeastern states for the steel strapping division of The Stanley Works. Formerly district sales manager in this area, Mr. Dickson will make his headquarters in Atlanta, Ga.

W. Wendell Drummond, for the past 14 years engaged in basic and applied research with the Owens-Corning Fiberglas Corp., has accepted a position with the Bjorksten Research Laboratories Inc.

R. B. Duty, service engineer with Sykes Inc. for the past 12 years, has resigned that position and joined the engineering staff of D & C Machine Co., Charlotte, N. C. Prior to his association with Sykes, Mr. Duty was assistant foreman of carding at Cannon Mills, Kannapolis, N. C.

Ely & Walker Dry Goods Co. has announced a number of executive promotions in the parent company's textile mill organizations. Charles A. Gibson, president of F. W. Poe Mfg. Co. at Greenville, S. C., and

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Calhoun Mills at Calhoun Falls, S. C., has been named director of manufacturing operations for the company's seven mills. Frederick A. McDevitt, formerly administrative assistant to M. Weldon Rogers, president of Ely & Walker, has been named director of mill and inter-company sales. Thomas S. Harris, formerly president of Postex and Sherman Mfg. Co. in Texas, has been assigned as president of Calhoun Mills, succeeding Mr. Gibson, who will continue as president of F. W. Poe in addition to his new duties. R. J. Jennings, manager of Postex, succeeds Mr. Harris as president of Postex. D. H. Poole Jr., manager of Sherman Mfg. Co., succeeds Mr. Harris as president of Sherman. W. O. Cate, in charge of the cotton department, will supervise cotton buying for all mills from his offices in Greenville, S. C.

Charles A. Lasky, chief fabric technician and designer for Celanese Corp. of America, has announced that he is retiring from the company, effective April 30. Mr. Lasky joined Celanese in 1929, and since then has played a part in the creation of many successful taffeta, satin, sharkskin and crepe fabrics of acetate which have become established in the apparel and drapery trades. Mr. Lasky plans to act as a textile consultant after he leaves the company.

American Cyanamid Co. recently announced three new assignments of company personnel. Dr. T. M. Vial has joined the new new product development department; Erhart K. Drechsel has joined the market research department; and Dr. Charles R. Witschonke has been named manager of the newly formed physical-analytical section of the research division.

W. Ray Dixon has resigned as manager of the Raleigh, N. C., plant of American Woolen Co. to join the woolen and worsted department of Burlington Mills Corp. at Greensboro, N. C.

J. C. Wade

J. C. Wade has been named manager of the new offices and warehouse of Polymer Southern Inc. at Atlanta, Ga. Mr. Wade has been with the company since 1948. Polymer Southern will continue to maintain warehouse stocks at Greenville, S. C., and Tampa, Fla.

A. G. Aitchison has been appointed manager, development department, and Dr. C. Burke Miles, research director of the Westvaco Mineral Products Division of Food Machinery and Chemical Corp. Dr. William L. Davidson and William B. Rose have been appointed research director and manager, respectively, of the Chlor-Alkali Division of the company.

W. L. Milheim of Charlotte, N. C., has been promoted from the position of Southeastern branch manager of the chemicals division of the Celanese Corp. of America to manager of the Southeastern district division. Mr. Milheim has been with the company since 1950.

R. T. LeGrand, president of Shelby (N. C.) Cotton Mills, was recently presented with a bronze plaque bearing his likeness by his employees and business associates for 40 years of able leadership. The plaque was presented at a barbecue served for employees.

Alice Mfg. Co., Easley, S. C., recently announced the promotion of Edward D. Carman to general superintendent of the company's Alice, Arial and Elljean plants. Mr. Carman, formerly with Union Bleachery, has been in charge of the quality control department. . . . J. Bruce Rogers has been promoted to superintendent of the Arial plant. Mr. Rogers has been with the company since 1929 and was overseer of the print cloth room at Arial at the time of his promotion.

Thomas A. Printon

Thomas A. Printon has been elected chairman of the board as well as president of Nopco Chemical Co., Harrison, N. J., succeeding Charles P. Gulick, who has been designated honorary chairman of the board. Mr. Printon has been with Nopco since 1922. He has served as director of the company since 1936, and has held the office of president since 1949.

William L. Dommerich, formerly executive vice-president, has been named president of L. F. Dommerich & Co. Inc. in a realignment of the New York factoring firm's executive personnel. Alexander L. Dommerich, who has been serving as president and treasurer, was named chairman. . . . Other changes include Dudley H. Dommerich, who has been vice-president, named treasurer and executive vice-president; George Hathaway, who has been secretary, named vice-president in addition; Alexander L. Dommerich Jr., who has been vice-president and assistant secretary, named assistant treasurer in addition. . . . Theodore B. Luse, who has been credit manager, was named a vice-president. He will be connected with the administrative end of mill credits. . . . Edwin C. Fox, a member of the credit department since October 1950, was

MAKING PLANS FOR THE SOUTH'S FIRST WET PROCESSING EXHIBITION to be held in conjuction with the 1954 annual convention of the American Association of Textile Chemists and Colorists at the Atlanta Biltmore Hotel, Sept. 15-18, was this group which met Feb. 5 at Atlanta, Ga. Seated, *left to right:* A. Kempton Haynes of Rohm & Haas Co., in charge of registration; T. Howard McCamy of Pepperell Mfg. Co., chairman of the Southeastern Section; P. G. Wear of Penick & Ford Ltd., assistant convention chairman; C. Russell Gill of Southern Sizing Co., general chairman; Paul O. Anderson of Peerless Woolen Mills, chairman of the South Central Section; James W. Swiney of Fulton Bag & Cotton Mills, in charge of finance; H. Gillespie Smith of American Cyanamid Co., in charge of reservations; and Joe T. Bohannon Jr. of American Aniline Products Inc., in charge of dining.

Standing, *left to right:* John K. Boykin of National Aniline Division, Allied Chemical & Dye Corp.; Dr. James L. Taylor of Georgia Institute of Technology; Samuel L. Hayes of Ciba Co. Inc.; Wyss L. Barker of National Aniline, in charge of transportation; David Meriwether of Seydel-Woolley & Co.; Junius M. Smith, TEXTILE BULLETIN, in charge of printing; William B. Griffin of Dexter Chemical Corp., in charge of ladies' activities; Max Ferguson of Riegel Textile Corp.; Francis S. Webster Jr. of F. H. Ross & Co. Inc.; John C. Cook of *Textile Industries*, in charge of exhibits; Adam Fisher Jr. of E. I. du Pont de Nemours & Co. Inc., in charge of reception; John O. Sweitzer of Scholler Bros. Inc., in charge of entertainment; and Arthur R. Thompson of Ciba Co. Inc., in charge of publicity.

all physical equipment and 20 acres of real estate. Mr. Abernethy has stated that the mill will become part of an expansion program of Carolina Glove factory which operates in Taylorsville and Newton. The expanded plant will employ 250. Brookwood, which manufactured knitting yarns and employed 150 people, discontinued operations last December.

GREENVILLE, S. C. — Piedmont Plush Mills, producers of velours, plushes, mohairs and auto upholstery, has become the first local industrial plant to use natural gas.

COLUMBIA, S. C.—Pacific Mills has announced that it is providing ten scholarships for a short course in hospital housekeeping sponsored by the American Hospital Association in co-operation with Michigan State College. The course will be held on the Michigan State campus from April 5 to May 27, 1954.

INDIANAPOLIS, IND.—Approximately $1 million worth of modern and practically new machinery will be transferred from the recently closed Indianapolis Bleaching Co. plant here to Bemis Bros. Bag Co.'s Southern plants at Bemis, Tenn., and Bemiston, Ala. Older equipment will be displaced, it has been announced.

WORCESTER, MASS.—It has been rumored that the Bell Co., manufacturer of men's and women's worsteds here, is considering a Southern location—possibly North Carolina—for the constructing of a new spinning plant.

KINGS MOUNTAIN, N. C.—Work is now under way on a major addition to the cotton warehouse of Park Yarn Mills Co. here. An official of the company said the addition will provide an added 17,000 square feet of floor space for cotton storage.

BURLINGTON, N. C.—H. & L. Throwing Plant Inc. has been granted a state charter of incorporation to engage in the manufacturing and handling of all kinds of yarns and threads. Authorized capital stock $100,000, subscribed stock $300 by W. S. Harris Jr., and D. J. Walker Jr., of Graham, N. C., and George A. Long, of Burlington.

SPARTANBURG, S. C.—Two of Spartanburg County's largest mills—Inman Mills at Inman and Riverdale Mills at Enoree—have completed their merger. Inman Mills is the surviving corporation with James A. Chapman continuing as president and treasurer of both plants.

SPARTANBURG, S. C. — The Fairmont Mills Inc. building has been bought by three Fountain Inn, S. C., businessmen for $100,000. Purchasers were B. P. and David H. Garrett and George F. Wenck. The new owners report that the building, which housed Fairmont Mills for several years until the cotton mill was closed a few months ago, will house a new industry to be determined later.

DILLON, S. C.—Plants No. 1 and 2 of Carolina Mills have been sold to Coastal Mils Inc., a new corporation recently formed here. The plants, which were sold by Credit Industrial Co. of New York which acquired them through an order by Judge Ashton H. Williams at Charleston, S. C., to satisfy creditors' claims, have been operating since 1948 under trustees appointed by the U. S. District Court. They have been closed down completely since last October, but the new corporation plans to have them back in full operation soon. Owners of the new corporation are Eugene E. Stone of Florence, S. C., Jack McD. Law and Merrill C. Patten of Greenville, and Sam Snoddy of Dillon.

NEW BRAUNFELS, TEX.—The Reconstruction Finance Corp. recently turned down an offer of $71,500 for machinery, equipment, stock and real estate of Pioneer Worsted Co. Inc. at New Braunfels. The amount constituted the highest bid at a recent auction. R.F.C., which foreclosed on Pioneer and then was highest bidder at a foreclosure sale for the firm's holdings, considered the offer inadequate since the agency has $391,400 tied up in the firm. A spokesman for the R.F.C. stated that the agency will negotiate sale of the firm's holdings.

YORK, S. C.—The Anchor Rug Mill has been purchased by Clayton Carpet Mills of Spartanburg for an undisclosed price. No real estate was involved in the transaction, but Clayton Carpet Mills has leased the building now occupied by the weaving division of Anchor. It is understood that additional machinery will be installed in order to increase production. Flaye T. Cloniger, president and treasurer of Anchor, announced that he is organizing a new concern to be known as Carolina Carpet Mills. The new concern will manufacture tufted broadloom carpeting with its plant in York.

SALISBURY, N. C.—North Carolina Finishing Co. has been honored by the Employers Mutual of Wassau, Wis., for completing one million consecutive man hours without a lost-time accident. Raymond P. Stewart, safety director of the plant, accepted an engraved plaque from the safety engineer of the insurance carrier company. Key chain replicas of the plaque were presented to all employees.

GREENVILLE, S. C.—J. P. Stevens & Co. will spend approximately $3,000,000 in a modernization program of preparatory equipment in several cotton plants of the Dunean Group, according to an announcement by Raymond G. Emery, executive vice-president of the company, and executive director of the group. Of this amount, about half will go for improvements at the Clemson and Seneca, S. C., plants of Utica and Mohawk Cotton Mills Division, with the other $1,500,000 being spent about equally by Appleton Co. Division, Anderson, S. C., and Piedmont (S. C.) Mfg. Co. Division. Mr. Emery also stated that in addition to the above-mentioned expenditures, over $250,000 will be spent for preparatory equipment at the Apalache and Victor plants at Greer of the Victor Monaghan Co. Division, and for a structural addition to the Victor Plant.

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Serving The Textile Industry

Relatively New, But No Lack Of Experience At Reichhold's Resin Plant In Charlotte

THE Charlotte (N. C.) plant of Reichhold Chemicals Inc. has been quietly carrying on a research program for the development of products for textiles since the Charlotte plant was added to the Reichhold family in 1951.

Comparatively new in the textile field, Reichhold Chemicals Inc. is the producer of synthetic resins, chemical pigment colors, industrial chemicals and phenolic plastics on a world-wide basis.

The Charlotte plant, serving the central Atlantic states, furnishes Southern plywood and furniture plants with resin glue. According to H. R. Helbig, division manager, about ten per cent of the plant's current production is devoted to liquid urea-formaldehyde-monomer resin for use in the finishing of rayon fabrics. The resin makes the rayon crush-resistant and provides dimensional stabilization.

Currently the largest consumers for the Reichhold resins—known commercially as "Fabrez"—have been the Rock Hill (S. C.) Printing and Finishing Co., Clarksville (Va.) Finishing Plant (of Robbins Mills Inc.) and the Richmond (Va.) Piece Dye Works.

Reichhold has plants at Charlotte, Tuscaloosa, Ala., Jacksonville, Fla., Detroit, Chicago, Elizabeth, N. J., Seattle, San Francisco and Los Angeles.

Each Reichhold plant has its own research program devoted to the development of products consumed locally. The West Coast laboratories, for example, are devoted to the development of paint resins, polyester resins, paper resins, printing ink resins and basic industrial chemicals used in West Coast processes. Charlotte, on the other hand, is more concerned with textiles and plywood resins.

This decentralized program of research and development speeds up the improvements sought in current products and allows the local staffs to give proper priority to the development of new products.

The Charlotte research program is under the direction of E. L. Babb, whose title is textile technical sales representative. Mr. Babb, who is a graduate of the University of South Carolina, is an experienced dyeing and finishing man formerly with Pacific Mills, Lyman, S. C. It is to him that Reichhold's textile customers direct their service problems. He divides his time between field contacts and laboratory research. Three manufacturing chemists are available at the Charlotte plant to put his field-encountered theories and problems through the Charlotte pilot plant in an effort to answer specific needs for consumers. Reichhold's customers are offered this service free of charge, of course.

Here is a typical service problem handled by Mr. Babb:

A foreign affiliate was having difficulty in preparing customer samples containing certain amounts of urea formaldehyde solids. The customer's own cloth was sent to the Charlotte laboratory with instructions that 14 per cent urea formaldehyde solids be fixed in the fabric without giving the fabric a harsh hand.

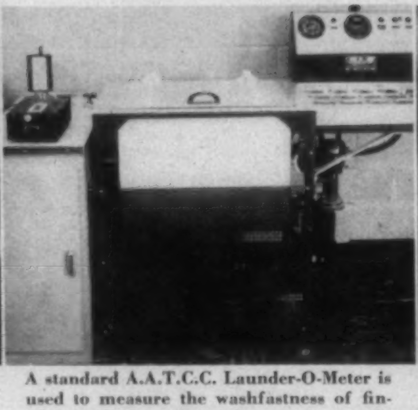
Fabrez T-302, a liquid urea formaldehyde monomer containing 25 per cent UF solids, was used in the application. By using a pad mix containing 86 per cent Fabrez T-302 and necessary catalyst along with a small amount of softener, a theoretical 16 per cent UF solids was deposited in the fabric. A 75 per cent wet pick-up was obtained.

A laboratory padder is used for applying resins to fabrics for shrinkage control and crease resistance, exactly duplicating mill conditions.

Following application, thermosetting type resins are dried and cured, resulting in a fabric finish which stands up under washing and cleaning.

In order to remove by-products from the cure, and to leave the finished goods fresh and clean for customer use, a moderate soaping completes resin process.

View of flat press used for drying and pressing test samples with a minimum of tension and distortion in the Reichhold lab.



A standard A.A.T.C.C. Launder-O-Meter is used to measure the washfastness of finishes and dyestuffs under precise conditions.

This view shows a spun rayon gabardine being checked for tensile strength in a room where relative humidity is held at 65 per cent and temperature at 70° F.

The above figures were based on an imaginary 100 per cent resin retention which of course was not realized. From past experience it was known that a resin retention of from 85 to 90 per cent could be obtained, so the original pad mix was altered to allow for the difference.

Resin retention was checked by the extraction method which admittedly has its shortcomings. Despite these disadvantages, however, good checks were obtained on several samples, and results showed the samples to contain an average of 14 per cent UF solids.

The fabric when finished had a resilient but soft and desirable hand.

Although the Charlotte plant has offered its pilot plant and laboratory service to the textile industry for almost three years, it has done so in a quiet, conservative manner. According to Mr. Helbig, the company prefers not to "toot our own horn until we come up with something hot."

There is a continuous interchange of ideas for research and development among the Reichhold plants, both domestic and foreign, which contributes greatly to the over-all progress of the Reichhold program without hindering the system of decentralized research. Each of the Reichhold plants warehouses all Reichhold products. There is relatively little importation of products from foreign plants, although the company exports a large volume of alkyd resins for paints, printing inks and other products.

According to Mr. Helbig, Reichhold expects to broaden its interests in the textile field in coming years. A number of products are being considered, among which are copolymer warp sizing, waterproofing resins, softeners and detergents. Reichhold may also enter the production of caustic in a Southern location some day in the future.

Winding Up Some Loose Ends For A.T.M.E. Ball Of Yarn

THE following items on the American Textile Machinery Exhibition at Atlantic City have been announced since publication of the March issue of the BULLETIN which carried a special section on WHAT, WHERE and WHO at the Exhibition. The show opens at 10 a. m. on April 26—see you there.

¶ The Virginia-Carolina Chemical Corp. will distribute 6,000 buttons at the show numbered consecutively and reading "Find Your Vicara Swatch Mate." One hundred buttons with duplicate numbers will be included in the 6,000—and to every person that finds his matching number, Vicara will present a man's sleeveless sweater by McGregor. The sweaters are a blend of Vicara and nylon. Check and see if "your number is up."

¶ A new management tool, developed to help mills in the selection and promotion of personnel, will be outlined and explained by Werner Textile Consultants of New York City at their booth (No. 86) during the show. Paul Stokes, prominent in the field of personnel testing, and previously associated with Westinghouse Electric Corp., will be on hand to describe to interested visitors a simple and effective battery of psychological testing procedures. The tests are designed to improve a mill's operating efficiency by selecting well-qualified employees, reducing employee turnover, increasing employee performance and helping in the promotion of personnel. They have proved to be an invaluable aid to management in their personnel evaluation and training programs, and provide ratings which are free from personal bias or subjective interpretation. Basically the tests reveal: (1) what a person *can* do; that is, his mental ability; (2) what a person is *likely* to do; that is, personality and temperament; and (3) what a person *wants* to do; that is, his interests. A national survey, recently conducted by the National Foremen's Institute, indicates that the average supervisor devotes 22 per cent of his time to the technical aspects of his job, and 78 per cent to human relations. Thus the scope of the supervisor's task in the personnel relations area emphasizes the need for more scientific methods in recruitment and selection. The Wernertex personnel testing program should be most appropriate since it points out a tested method of recruiting more suitable personnel to operate the newly developed machinery.

¶ There has been a change in booth numbers for the Robert C. Reed Co. The corrected booth numbers are 310AA and 311AA.

¶ B. F. Perkins & Son Inc., Holyoke, Mass., occupying booths 130, 131, 132 and 133, will display calender rolls of various types, three types of Mullen testers, an hydraulic power unit and an illuminated display of textile machines made by the company. J. Lewis Perkins will attend the show along with B. F. Perkins, C. A. Potter, Ben Ashley, Thomas Kane, B. Q. Haynes, E. Herder, S. Butler, Eric Norman, Tom Kavanagh, Harry Gillead, William Garen, C. Stevens, William Greenwood, and H. Gelhart.

¶ Kearny Mfg. Co. Inc., Kearny, N. J., occupying Booth No. 309, will display for the first time the Threadco and Yarco conditioning process on winders along with a conventional Hygrolit yarn conditioning machine and the Surco-Perma conditioning process on winders. C. F. Dulken, president of the firm, will be in attendance at the booth along with Enno W. Ercklentz, Carl M. Baunach, Paul J. Sturzenegger, Josef Rath and Ralph P. Jacobs.

¶ Convenient-to-carry floor plans of the exhibition listing all exhibitors by name, booth number and product or service will be available at the Booth of the BULLETIN, No. 88 to the right of the main entrance to the hall. Drop by for a copy.

Carbic-Moss Corp.

Carbic-Moss Corp. has been formed as a step toward consolidating efforts of Carbic Color & Chemicals Co. Inc., New York, and Dyer S. Moss Co., of Charlotte, N. C., which represented Carbic in the South. Dyer S. Moss is president of the new company, Carl W. Kuhl II is vice-president and Thorwald Larson, vice-president in charge of sales. The new company will also be exclusive representatives of Pharma Chemical Corp.; Otto B. May Inc., Newark, N. J.; Refined Products Corp., Lyndhurst, N. J.; and Pfister Chemical Works Inc., Ridgwood, N. J., in addition to Durand & Huguenin S. A. of Basle, Switzerland.

Sonoco Safety Record

Sonoco Products Co., Hartsville, S. C., has been notified that it has qualified for the Award of Honor given by the National Safety Council. The award is based on improvement shown in both the frequency and severity rates of accidents in member companies. The National Safety Council makes three awards each year, of which the Award of Honor is the highest. This is the second straight year that Sonoco has qualified for the award. Sonoco had an improvement of 69 per cent in frequency and 80 per cent in severity.

Whitin-Casablancas

Whitin Machine Works, Whitinsville, Mass., has announced a new long-term agreement with the Casablancas High Draft Co. Ltd, Salford, England. Under the terms of the agreement many of the Casablancas products for the drafting area will be available for application to Whitin machinery. The two-apron system of fiber control was originally developed by F. Casablancas Sr. and introduced to the American market by Whitin, under license, in 1929. Since then, it has been further developed and refined by Whitin for the needs of the American market.

The extensive research and engineering facilities, knowledge, and experience of the Casablancas, which is specifically devoted to drafting, are now added to the resources of the Whitin research department. The association of the Casablancas High Draft Co. as specialists in drafting and the Whitin Machine Works as one of the largest textile machinery manufacturers in the world is expected to be beneficial not only to both companies but of considerable importance to the textile industry.

Furnace Corp. Reorganizes

The Charlotte, N. C., branch of the Electric Furnace Corp. has announced its reorganization into Livingstone Coating Corp. The Electric Furnace Corp. is the oldest custom coating company specializing in the application of Du Pont's Teflon in the South, starting this operation in Chattanooga, Tenn. in 1951. The branch in Charlotte, N. C., although increasing its Teflon coating program, has adopted new plastic coatings which are said to be extremely corrosion resistant and durable. J. S. Livingstone, vice-president of Electric Furnace Corp., is now president and treasurer of Livingstone Coating Corp. Other officers are D. F. White, vice-president, Birmingham, Ala., and B. J. Livingstone, secretary, Charlotte, N. C. Mr. White is sales manager for the Midland Wire Corp. of Birmingham.

J. S. Livingstone

Holyoke Appoints Agent

Holyoke Machine Co., Holyoke, Mass., has appointed Industrial Equipment Co., Charlotte, N. C., as sales representative for Holyoke textile calender and embossing rolls in the states of Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. Alexander F. Schenck will be in charge of sales of Holyoke textile rolls for Industrial Equipment Co. Holyoke Machine Co. specializes in the building, refilling and repairing of calender and embossing rolls as well as the grinding and repairing of peralta rolls.

U. S. Testing Co. Lab

The U. S. Testing Co. has established a branch laboratory in South Carolina in the plant of the Palmetto Worsted Mills at Laurens. The laboratory is equipped and staffed to maintain control of quality levels of raw materials, materials in process, and finished products of that mill. It is also, however, available to perform textile tests for other plants, including measurements of pertinent properties of fiber, roving, yarn, fabric and garments, including wool and worsted, cotton and synthetics. The development is significant in view of the fact that when this company establishes a mill laboratory, it generally follows it with completely equipped operating branches. The company is already giving further planning attention to its next moves in South Carolina. The company, which was established in 1880, is a national organization covering all classes of industry in the fields of scientific research, inspection and testing.

Hobbs Open New York Office

Opening of a branch sales office in New York City has been announced by the Hobbs Mfg. Co., of Worcester, Mass., manufacturer of a complete line of modern converting machinery. Sales and services in this New York office are under the direction of George B. Clay, who has been associated with the company for the past ten years. Mr. Clay entered sales work from the production and supervisory fields. He has contributed actively to the development of Hobbs machines and is intimately acquainted with their construction as well as with their operation. Products that are being handled out of the New York office include: Hobbs Autotronic, Adjustable Die, and Tri-Power presses; Hobbs production cutters, power shears, corner cutters; Hobbs slitters and rewinders; Hobbs Strong label cutters; Jacques hand shears; and the Hobbs Alquist winders. In addition to this office in New York, Hobbs maintains a branch office in Chicago, Ill.

Chemical Company Moves

The Chemical Processing Co. of Charlotte, N. C., manufacturers of textile chemicals and specialties, has acquired the property and equipment of the Ray Chemical Co. in Charlotte, according to a recent announcement. The company will occupy its new quarters this month and will continue to manufacture some of the products formerly made by the Ray Chemical Co., in addition to the items made by the Chemical Processing Co.

Reliance Electric Sales Clinic

District sales managers for Reliance Electric & Engineering Co. recently attended a three-day sales clinic at the company's headquarters in Cleveland. Representing sales districts all over the nation, the district managers reviewed the 1953 sales volume on electric motors, adjustable speed drives and related equipment and predicted a continuing heavy volume for 1954. It was pointed out that many new applications have been developed for the use of these products and that modern industry is constantly exploring more application possibilities.

Graver Water Conditioning Co., New York City, has announced the establishment of a new industrial waste department which will be headed by Robert J. Keating. As a result, industrial waste activities are to become a more important part of Graver's comprehensive water treating services.

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Now, for the first time your looms can be cleaned quickly and efficiently without the use of inflammable liquids or water base, rust forming cleaners.

SUN RAY CONDITIONER is simple to use. It is completely harmless to the machine, to your personnel and the work in progress.

Cleaning with SUN RAY CONDITIONER is fast. A loom can be cleaned in a matter of minutes. After the initial cleaning the loom stays clean longer and "blows off" easily.

Eliminates "weavers hands."

Will not dry grease out of bearings.

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Ask for a demonstration. Your GUARDIAN Man will gladly show you how easily and quickly you can clean your looms with SUN RAY CONDITIONER.

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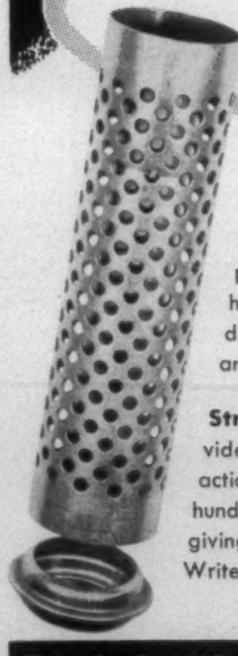

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Precision Built: These tubes are perfectly sized for roundness, and holes are evenly spaced for uniform dye penetration. Ends are 100% level and rounded to prevent snagging.

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. . Give Us Adequate Tariff Protection Or Give Us Death—Alabama Assn. Meeting

THE dangers posed by a further reduction of already low United States tariffs . . . indications of a better year for textiles in 1954 than was experienced last year . . . the necessity for keeping abreast of improvements in machine technology.

These were the subjects highlighted at the annual convention of the Alabama Cotton Manufacturers Association in Biloxi, Miss., March 18-20.

J. Craig Smith, first vice-president of the American Cotton Manufacturers Institute Inc., and president and treasurer of Avondale Mills, Sylacauga, Ala., voiced the opinion of the textile industry generally when he declared that to permit the influx of cheap foreign cloth made by cheap labor into this country by a still greater slash in the tariff would be "to open the veins" of those who look to the textile industry for their livelihood.

T. P. Roberts, retiring association president and treasurer and general manager of Adelaide Mills, Anniston, expressed optimism over better prospects for the industry this year than last. His buoyancy, however, was tempered by his comment that conditions in the last half of 1953 were so poor that there is no way for them to turn except up.

At its closing session the convention elected as its new president T. Holmes Floyd, general manager of the Opelika Mfg. Corp., Opelika, succeeding Mr. Roberts, who was named chairman of the board. Other new officers elected were Fred F. Phillips, president of Buck Creek Cotton Mills, Siluria, vice-president; and R. C. Moyer, general manager, The Linen Thread Co., Blue Mountain, treasurer. Dwight M. Wilhelm, Montgomery, was re-elected executive vice-president.

New directors named were: Paul A. Redmond Jr., executive vice-president, Alabama Mills, Birmingham; W. A. Turner, vice-president and general superintendent, Avondale Mills, Sylacauga; and W. G. McClintock, personnel director, Dwight Division, Cone Mills Corp., Alabama City.

The convention heard Guy Farmer, chairman of the National Labor Relations Board, Washington, D. C., strongly advocate a gradual but marked withdrawal of the hand of his board from strictly local labor disputes involving local people. Mr. Farmer said he felt such disputes should be handled on the local levels.

Frederic W. Howe, Worcester, Mass., president of the American Textile Machinery Association, told the textile men that while new office buildings and other similar capital improvements are desirable, it is up-to-date machinery that can produce at ever-lower costs for the nation's textile mills that provide the farmer with an expanded market for his improved cotton. Mr. Howe warned that mill operators must be constantly alert to keep pace with the improvements in cotton fibers. Mills which have not kept abreast of such technological improvements, he added, cannot compete successfully in today's markets.

The convention voted unanimously to support the stand of the American Cotton Manufacturers Institute in its opposition to a proposal to reduce the cotton ginning reports of the U. S. Department of Agriculture from two to only one a month. The group felt that the savings which might be effected by such a move could better be effected by other economies.

In a non-hazardous industry, mills in Alabama are heading toward the goal of having the safest mills in the world for their 50,000 employees, the convention heard during a presentation of trophies to winners in the annual Alabama Textile Safety Contest. Joe L. Coleman of Montgomery, Ala., director of the Alabama State Department of Industrial Relations, declared that textile mills have demonstrated that they are among the safest of all industrial establishments in which to work.

The spinning division trophy was presented to Gurney Mfg. Co., Prattville, and was accepted by Frank S. Pittman Jr., manager. A year ago this company won permanent possession of the Comer trophy for having won the contest three years in succession. Last year it broke all records by winning it for the fourth straight year and a new trophy was presented. The spinning and weaving division trophy was presented to Goodyear Decatur Mills, Decatur, and was accepted by C. W. Young, superintendent.

President Roberts in his annual address emphasized the variety of projects in which Alabama mills had engaged last year to demonstrate their ready acceptance of their social, civic and political responsibilities as well as their economic responsibilities. "I believe that the soundest basis for economic growth is a responsible citizenry," he declared, adding that he also felt the textile industry in his state had been foremost in assisting those institutions and organizations dedicated to developing responsible citizens.

One of the most successful projects undertaken by the

T. P. Roberts

T. Holmes Floyd

J. Craig Smith

Dwight Wilhelm

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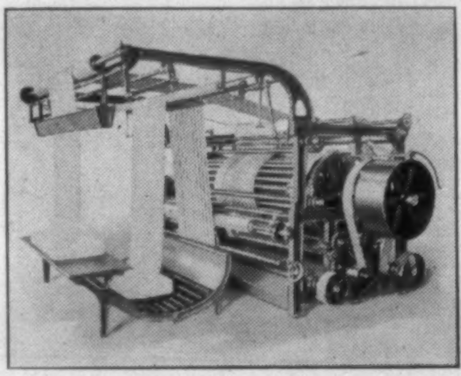

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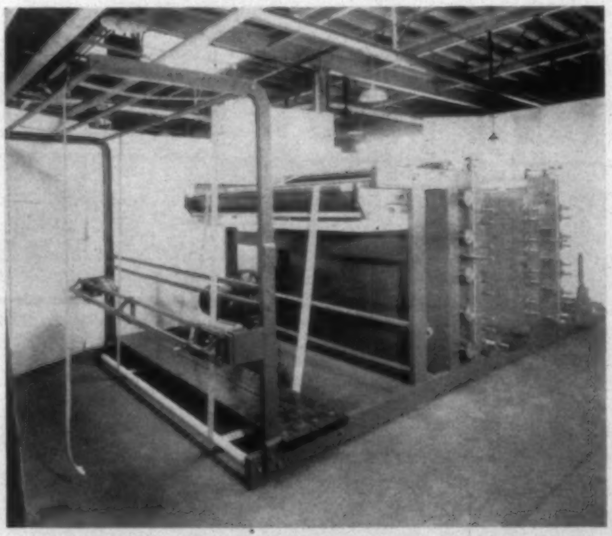

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association, he said, was the annual One-Variety Community Cotton Improvement Contest, conducted by the Alabama Polytechnic Institute and sponsored jointly by the association and the Alabama-Florida Cottonseed Products Association. This project was headed for the textile group by J. Craig Smith.

Another highlight of the past year was the formation by the mills of a Textile Advisory Committee which, in turn, created the Alabama Textile Education Foundation to work with the School of Textile Technology at Auburn in further textile education. This committee reported that thus far the mills have subscribed more than $17,600 for this purpose.

In his address, Mr. Smith emphasized that a further lowering of American tariffs would serve only to divert more goods from the regions of scarcity to the one region of great abundance and, in the process, would threaten destruction of the nation's textile industry.

Our industry as a whole represents a capital investment of seven billion dollars and in all its segments it provides jobs for a million and a quarter people, paying an annual wage bill of some $3 billion. It consumes on the average about two-thirds of the American cotton crop, processing that fiber into an output which is twice that of Japan and England combined. We are a $2 billion a year customer of the American cotton farmer—and by far his best customer. The industry is a key factor in the support of agriculture for the entire Southern portion of the United States from the Atlantic to the Pacific, and throughout much of the nation it buttresses scores of industries which service and supply the textile mills.

Purely in the area of textile manufacture, we annually buy some $800 million worth of chemicals and $438 million worth of miscellaneous goods from small industries, to mention just two categories. Even these figures, however, are based on 1947 census data. Annual expenditures for new plants and equipment alone during the post-war period have averaged around $500 million.

During World War II the Quartermaster General said that our industry was second in importance only to steel in carrying on a successful war effort. Obviously, we cannot have a textile industry during times of national emergency unless we maintain it in peacetime. Surely in the national interest we could not rely on getting the hundreds of essential military textile supplies from Europe and Asia.

As opposed to the vigorous and healthy competition we have in our domestic industry, the foreign textile industry, like most other foreign industries, operates under a cartel system. This means that with the approval and co-operation of their own governments, their prices are fixed by agreement. This system would make it all the more easy for them to dump their production in this country. Every yard so dumped would surely displace a yard made here. In addition, the importation of this cheap foreign cloth, made with cheap labor, would have a demoralizing effect on our already depressed price structure and the uncertainty as to how much more might be imported would make it impossible for our industry to sell for forward delivery.

India is using the same cheap labor which she uses in her cotton mills to materially increase the production of her raw cotton. Those people who wish to see cheap cloth, made with cheap labor, brought into this country usually argue that this would provide dollars with which the foreign spinner could buy American cotton and that the result would be an increased export business for the cotton farmer. Perhaps the foreign spinner would temporarily increase his purchases of American cotton. However, he would do so only until he could develop a cotton supply closer home. How, then, could it possibly benefit the cotton farmer to cripple his best and most permanent customer, the United States textile industry, in order to start up a mill in India or some other foreign country?

I have no sympathy with giving any industry tariff protection unless that industry is highly competitive. If an industry is monopolistic or has monopolistic tendencies, in my judgment it should have foreign competition. I hold no brief for giving tariff protection to domestic production if foreign production can be sold here because it is better quality or better styled.

The fact is that cotton cloth manufactured in foreign mills can be sold in the United States for one reason, and one reason only. That

> reason is because it is cheap. It is cheap for one reason, and for one reason only. That reason is because it is made by cheap labor.
>
> Our government, by law, maintains a minimum wage scale several times that of our foreign competition. The actual wages paid in our mills substantially exceed this legal minimum but are certainly no more than are needed to maintain an American standard of living. Surely it would not be in the national interest to pass a law setting up a minimum wage rate and then permit cheap cloth, made with cheap labor, to make it impossible to provide jobs at the legal minimum wage rate.
>
> Per capita cotton consumption in the United States, on a yearly average, runs more than 27 pounds. Compare this with six pounds per person in Central and South America, four pounds in Asia, 2½ pounds in Africa and only eight pounds in highly civilized Europe. These facts suggest the real problem lies with economic policies of other countries, not the U. S. tariff. The under-developed countries, whose populations need clothing, are trapped in their own programs of trade restrictions and nationalism.
>
> As I see it, a lowering of American tariffs would only divert more goods from the regions of scarcity to the one region of great abundance. How would that help the needy people of Africa, Asia, South America and Indonesia? Such an action would only make the United States a substitute market for the textile industries of Western Europe—and in the process the conditions which gave us our abundance would be threatened with destruction.

Entertainment highlight of the convention was the traditional "Linthead Welcome Party," which this year was combined with a talent contest. The affair uncovered an interesting diversity of talent among the textile executives and their guests. About 375 persons were present for the meeting, headquarters for which were at the Buena Vista Hotel.

Testing Company Announces Textile Course

The United States Testing Co. Inc., announces the 17th Summer Refresher Course in Textiles and Testing Techniques (s-175) which will be conducted during the second half of the Teachers College Summer Session, Columbia University, July 26 to Aug. 13. The course will be held at the company's main laboratories in Hoboken, N. J. This also marks the fifth year Teachers College has accredited the course for three points credit toward a degree.

This comprehensive three-week course is open to representatives in the field of home economics, education, retailing and others who have had some elementary textile training. Through lectures, demonstrations, and practice sessions, students will cover all phases of analyses on textiles and related merchandise, identification of fibers, chemistry, detergency and research. Special emphasis will be given to the various textile processing and finishing techniques. Field trips are scheduled during the course to supplement the class work.

This course offers an outstanding opportunity for further education in textile development. Former students have found the course stimulating and informative. Enrollment has included representatives from all over the United States as well as from foreign countries.

Each student receives an extensive collection of reference material, consisting of fibers, yarns, swatches and literature. Since the group is limited in number, each member may receive individual instruction and opportunity to use equipment.

Classes will be in session from 9 a. m. to 4 p. m. from July 26 through Aug. 13. In addition, three days, Aug. 16-18, are scheduled with elective field trips for interested class members. For further information and application forms, write to: Ruth Holmes Little, Director, Consumer Service Division, United States Testing Co. Inc., 1415 Park Avenue, Hoboken, N. J.

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Bright Outlook For Textiles, With Certain Reservations, Cited To Georgia Mill Men

THE future holds brighter promise for the textile industry of the South than has any period in history, the retiring president of the Cotton Manufacturers Association of Georgia said at Boca Raton, Fla., April 8. R. H. Jewell, who also is vice-president of Crystal Springs Bleachery, Chickamauga, Ga., told the 54th annual convention of the association that "we have survived the era of pioneering and are in our maturity."

Nevertheless, he said, the industry still remains confronted with several major problems. "The problem of foreign economic policy with particular respect to the tariff," he added, "presents perhaps the most serious situation now confronting our industry."

Of far greater importance than this nation's tariff structure to the limitations on international trade, he asserted, "is the almost astonishing network of embargoes and import quotas, manipulation of currencies and a host of other artificial restraints which have been erected by governments abroad and which are directed most drastically against the United States."

Referring to the so-called "dollar-gap," the speaker said this already had been largely closed. "It is estimated that the foreign dollar balance this year will reach approximately $3,000,000,000," he said. "Already, U. S. expenditures of dollars in foreign markets exceed foreign expenditures in this country by about $2,500,000,000. The several Western European countries which have been most effective in improving their reserve holdings have been the loudest in their demands for tariff reduction.

"What is needed is not a still further reduction of our low tariffs. What is needed is the elimination of this artificial network of trade barriers which tends to restrict the maximum consumption of goods in countries in which they are urgently needed—and a consequent return to free convertibility and interchangeability of currencies." When this has been accomplished, he continued, "we may expect to find new opportunities for aiding the economic growth of underdeveloped areas and the opening up of vast new markets, and the return to true multilateral trade."

Another problem facing the industry, Mr. Jewell declared, revolves around "the total inadequacy" of depreciation schedules on production machinery. He said one of the major reasons for the successful operation of Georgia mills has been their practice of maintaining a high degree of mechanical perfection and efficiency by the continuing installation of new and better equipment. Present depreciation allowance schedules permitted by the government, he contended, are inadequate for this purpose.

George E. Glenn Jr., president of Exposition Cotton Mills Co., Atlanta, was elected president of the Cotton Manufacturers of Georgia at its closing session April 9. He is the sixth official of his company to hold the post. Other Exposition executives who also served as association presidents were: Charles D. Tuller (1910-11), Allen F. Johnson (1914-16), P. E. Glenn (1923-24), George S. Harris (1924-27), and John A. Miller (1940-41).

A native of Columbus, Ga., Mr. Glenn went to work at the age of 18 in the Columbus Plant of Bibb Mfg. Co. In 1924 he became associated with Swift Spinning Mills in the same city. Six years later he joined Pepperell Mfg. Co. at Lindale as overseer of carding and had advanced to the position of assistant general manager when 12 years later he left to become president and general manager of Exposition. In the latter post he succeeded the late John A. Miller.

Mr. Glenn has served as general chairman of the Textile Operating Executives of Georgia, a director of the old Cotton-Textile Institute and of the National Association of Manufacturers. Last year he was vice-president of the Cotton Manufacturers Association of Georgia and had served as its treasurer in 1952. His civic activities have included directorships of the Atlanta Child's Home and Atlanta Y.M.C.A.

T. M. Forbes, executive vice-president of the Georgia association, was re-elected to that post for the 28th time. "We couldn't visualize this association without Ted Forbes as its executive vice-president," Mr. Glenn told the convention. Morris Bryan Jr., Jefferson Mills Inc., Jefferson, who as treasurer kept the association in the black the past year, was elected vice-president, succeeding Mr. Glenn. Henry McD. Tichenor, president of Walton Cotton Mill Co., Monroe, Ga., was elected treasurer to succeed Mr. Bryan. Frank Carter was re-elected secretary.

New directors elected were: A. G. Dunson, Summerville Mfg. Co., Summerville; George W. Murphy, Mary Leila Cotton Mills, Greensboro; William Swift, Muscogee Mfg. Co., Columbus; Hansford Sams, Scottdale Mills, Scottdale; and David Hamilton, Crown Cotton Mills, Dalton.

Mr. Glenn expressed his appreciation to Mr. Jewell for the service he rendered the association during his administration. He was given a standing vote of thanks. "I appreciate this honor and will endeavor to serve in the best tradi-

George E. Glenn Jr.

T. M. Forbes

R. H. Jewell

Frank Carter

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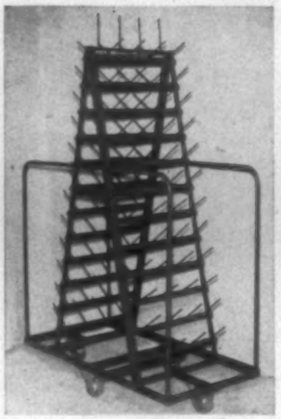

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tion," he told the members. Mr. and Mrs. Jewell were presented a silver tray at the annual banquet held Thursday evening. The presentation was made on behalf of the membership by Henry W. Swift, executive vice-president of Swift Spinning Mills, Columbus, a past president of the association.

Mr. Jewell expressed the appreciation of the suppliers for the reception preceding the banquet. The golf prizes, donated by suppliers, were awarded by Jess Stribling, Universal Winding Co., Atlanta, chairman of the special entertainment committee.

Miss Jane Cagle, who has completed 25 years of service to the association, was honored in a special resolution and a rousing hand of applause from the members and guests. Mr. Jewell paid tribute to Harold Young, chairman of the board of the National Cotton Council, for his great contribution to the cotton industry. Following the banquet a floor show was held followed by dancing.

The Cotton Manufacturers Association of Georgia has grown to the point where currently its membership embraces more than 99 per cent of all the textile mills in the state, the convention was told by Ted Forbes in his annual report. With the exception of only two mills of significant size and a few mills that are very small, the association includes in its membership all but a fractional percentage of the total textile industry of the state and embraces mills which use wool, synthetic and other fibers in addition to cotton, he said.

Reviewing activities of the past year, Mr. Forbes said that all of the association's 11 committees were highly active, engaging in projects ranging from co-operation with farm groups to concern with stream pollution. Work in the field of constructive state legislation provided one of the association's most important functions, he asserted. He urged the members to take an active interest in Georgia's legislative problems, adding: "The preservation of Georgia's healthy industrial climate, as well as the competitive position of Georgia manufacturers who are engaged in interstate commerce, is dependent in a very large part on the avoidance of burdensomely restrictive legislation and confiscatory taxes."

He said the matter of state taxes was becoming increasingly important to Georgia business and industry. "The total income of the state from all tax sources has increased during the past ten years from $61,772,210 for the fiscal year ended June 30, 1944, to $218,812,199 for the year ended June 30, 1953," he said. "That was an increase of more than 250 per cent, and the approved state budget for the year ending June 30, 1954, is $258,448,780. It is conservatively estimated that the state will incur a cash deficit of about $20,000,000 for the current year and if the continually increasing demands for additional funds are met, the deficit will be considerably greater in succeeding years—unless additional tax increases are imposed upon the people of Georgia."

He said a bill passed by the last session of the legislature exempting from the sales and use tax any property which a Georgia taxpayer owns in another state and which is transferred or moved into Georgia for use in this state "removes an inequity that should never have been created."

Mr. Forbes told the executives also that in terms of public relations accomplishments, the association had experienced one of the most successful years in its history. Other major activities, he continued, included co-operation with agriculture, the textile safety contest, work in connection with federal legislative matters, and work in connection with electric power and gas rates.

Industry and business today may be faced with their "last clear choice" to "help preserve and advance what is left of free-enterprise in higher education," Dr. David A. Lockmiller, president of the University of Chattanooga, told the convention. "If the independent and church related colleges of the nation are permitted to die because of a lack of adequate support, "you will be working for the government too." The partnership of education and industry, the speaker said, has paid the highest possible dividends. He added:

"Free and educated citizens produce more, earn more, buy more, and pay more taxes. They are healthier, happier, more law-abiding, and better companions to themselves and to society. No saying was ever more fallacious than 'what you don't know won't hurt you.' A lack of 'know-how' will hurt you, and that lack in a democracy can be fatal to survival in an atomic age."

He urged the manufacturers, through foundations and scholarship programs or directly, to "take full advantage of the five per cent deduction which corporations are permitted to make for educational and welfare purposes under the internal revenue laws," to help preserve the independent institutions of higher education.

The association then heard an address by Dr. George Benson, president of Harding College in Arkansas. America's heritage, Dr. Benson told the millmen, is in jeopardy today. This heritage consists of (1) faith in God, (2) constitutional government and (3) a private enterprise economy which has resulted in higher production, competition and free labor.

Today our national income equals that of the next six nations, he pointed out. However, today this heritage is threatened by downright lethargy, juvenile delinquency and a Communist propaganda campaign. He urged the millmen to work toward keeping the flame of religion burning high; to outlaw the Communist party and fronts to prevent "organized treason, and to take more interest in government."

Georgia Cotton Buyers Elect Officers

R. O. Simmons, Pepperell Mfg. Co., Lindale, Ga., has been elected chairman of the Cotton Buyers' Division of the Cotton Manufacturers Association of Georgia, at the annual meeting of the group in Atlanta. He succeeds Robert Train, Bibb Mfg. Co., Macon. Floyd Hall, Dixie Mercerizing Co., Chattanooga, Tenn., was elected vice-chairman, and Frank Carter, Cotton Manufacturers Association of Georgia, was re-elected secretary. Three-year members of the executive committee were elected as folows: Ferrell T. Towns, Callaway Mills, M.M.C. division, LaGrange, Ga.; S. C. Mitchell, Crompton-Highland Mills, Griffin, Ga.; A. G. Vogt, Fulton Bag & Cotton Mills, Atlanta, Ga., and George W. Branch, Tifton Cotton Mills, Tifton, Ga.

Other members of the committee are: (one year) A. B. Combs, Dundee Mills Inc., Griffin, Ga. (deceased); Floyd Hallman, Dixie Mercerizing Co., Chattanooga, Tenn; Roscoe R. Reynolds, Bibb Mfg. Co., Macon, Ga.; and T. D. Truluck, Deering Milliken Mills, Union, S. C. Two years: James A. Hammond, Riegel Textile Corp., Trion, Ga; J. C. Stewart, Exposition Cotton Mills Co., Atlanta, Ga.; J. H. Bowers, Columbus, Ga.; and S. T. Young, Canton Cotton Mills, Canton, Ga.

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Basic Materials Exposition, May 17-20

Many executives in the textile industry are expected to attend the Basic Materials Exposition at the International Amphitheatre, Chicago, Ill., May 17-20, if indications from advance registrations are borne ouf. "Recent developments have made textiles one of the most important basic materials used by industry," said Saul Poliak, president, Clapp & Poliak Inc., producers of the show and concurrent conference. "Many of the discussions, both at the conference and in the exhibit booths, will center around the growing uses of textiles. The exposition was started last year with the idea that there ought to be one place where the values of different materials could be discussed and related to each other. At vertical expositions, the various forms of a single material are presented. However, at the Basic Material Exposition it is possible to see all the materials to determine where product improvements can be made and costs reduced." The show and conference lay their stress on product development. Frequently, it is possible for a design engineer to borrow ideas from a new material developed for a different purpose in another industry. Seventeen outstanding specialists will lead the conference discussions. One of the principal topics will be a discussion of the peacetime uses of materials developed for the special needs of rockets and guided missiles. Among other topics of special interest will be "How To Set Up a Materials Department," "How, When and Where To Use Non-Metallic Materials," "New Metal Forming Processes," "Bonding of Metals and Plastics," and "Corrosion." The exhibits will emphasize the practical applications of materials, both new and conventional types. Only materials will be shown. Machinery maunfacturers may attend as guests but may not exhibit. There is no charge for registration at the exposition.

Celanese Hails Court Victory

Termination of the five-year-old civil anti-trust suit against Celanese Corp. of America attacking the 1946 merger of the company with Tubize Rayon Corp., has been hailed as a complete victory for the company by Harold Blancke, president of Celanese. The government, in its complaint, charged that the merger of the two companies unreasonably restrained trade in the manufacture and sale of acetate and rayon warp knit fabrics in the U. S. and asked the court to compel Celanese to divest itself of all assets it had acquired by its merger with Tubize. The acquired assets included the Rome, Ga., plant which primarily made viscose rayon yarn, and the Hopewell, Va., plant which made viscose rayon warp knit fabrics. Both factories were fully equipped. The complaint also asked the court to enjoin Celanese in the future from acquiring any other companies engaged in the manufacture or sale of acetate or rayon warp knit fabrics.

"The government, recognizing that Celanese has not restrained, or tried to restrain, the manufacture and sale of acetate or rayon warp knit fabrics," Mr. Blancke said, "offered a decree, the sole requirement of which was that the company sell the warp knitting machines it acquired by merger with Tubize in 1946. In order to save the expense of a trial as well as the time of executives, we have agreed to the decree which merely directs us to do what the government well knew we had already done. Actually, the company has been gradually selling both weaving and knitting machines in the market since prior to 1949 in the ordinary course of its business and all of the machines covered by the decree have now been sold. This action was taken in accordance with the announced policy of the company to reduce its weaving and knitting operations, since the purpose for which they were started has been accomplished. Our Bridgewater, Va., warp knitting plant has for some time operated as an industrial laboratory for the trade. Representatives of the leading warp knitters of the country, at our invitation, have visited the plant and inspected the newest technological improvements installed. Thus, fabric development and technoligical advances have been turned over to the industry. Celanese Corp. of America also made available to the entire textile industry on a royalty-free basis a patent held by it on a cloth-scanning stop-motion device for warp knitting machines. In addition, the company has distributed samples of detailed construction data of new fabrics to the entire warp knitting industry and made available for general sale new and cheaper yarns utilized in the manufacture of acetate and rayon warp knit fabrics. Thus, contrary to the government's charges of monopoly directed at a comparatively small part of the company's operations, it has been and is the policy of the company to co-operate with and to assist the industry."

Atlanta Chapter Of Delta Kappa Phi

An alumni chapter of Delta Kappa Phi has been organized in Atlanta and Ernest N. Young Jr., East Point, Ga., has been elected consul. Other officers elected include Ben H. Bulloch, Habersham Mills, Habersham, Ga., proconsul; George C. Lindsey, Pacolet Mfg. Co., Gainesville, annotator; and Samuel M. Willis, A. French Textile School, Georgia Tech, custodian. The chapter plans to hold quarterly meetings and the next meeting will be held in June.

Safety Council Names Award Winners

The National Safety Council has announced the names of the winners of its textile section safety contest. The contest, which lasted all of 1953, was divided into two divisions, one for entire companies—the other for individual mills. Placing one, two, three in the entire company division were Tallassee Mills, Tallassee, Ala., owned by Mt. Vernon-Woodberry Mills Inc., Baltimore, Md., with a frequency rate of .47 for lost time accidents; Martha Mills, Thomaston, Ga., a division of B. F. Goodrich Co., Akron, Ohio, with a rate of .85; Judson Mills, a division of Cotwool Mfg. Corp., Greenville, S. C., with a rate of 1.28 for the year.

In the division for individual mills, the first place winner was Coates & Clark Inc., Toccoa, Ga., with a .00 rate. Second place: United States Rubber Co. (Winnsboro Mills), Winnsboro, S. C., with a rate of .35. Winner of the third place was Appleton Division, J. P. Stevens Co. Inc., Anderson, S. C., with a rate of .36. First place winners will receive plaques while winners of second and third awards will receive certificates.

Textile Division, A.S.M.E., Meets May 21

The attack that the electrical industry is making on the problem of rising power costs coupled with increasing power needs will be described at the Spring meeting of the textile engineering division, American Society of Mechanical Engineers at the Hotel Sheraton in Boston on May 21. L. A. Runton, division chairman and director of engineering for Alexander Smith Inc., reports that four engineers who specialize in textile machinery drive requirements will chart the latest developments in that field. Honor speaker at the luncheon session will be James H. Hunter, vice-president, James Hunter Machine Co., North Adams, Mass. He will report on "European Textile Trends and How They Affect American Mills." Mr. Hunter's talk will be based on the observations he made during a European tour which is now being planned. Lindsay Dexter of Pepperell Mfg. Co., Boston, will preside over the morning session. Chairman for the afternoon will be R. M. Jones, vice-president, Saco-Lowell Shops, Biddeford, Maine. Subjects to be discussed include "Matching Electrical Characteristics to Textile Machinery Drive Requirements" by R. E. Parker, General Electric Co., Schenectady, N. Y.; a paper with the same title will be delivered by Fred Snyder, Westinghouse Electric Corp., New York; "An Interpretation of Loom Drive Requirements," by R. H. Brown, Warner Electric Brake & Clutch Co., Beloit, Wis.; and "Electric Multiple Clutch Plate," by Richard Palmer, The Carlyle Johnson Machine Co., Manchester, Conn.

Program For Piedmont A.A.T.C.C. Outing

A tentative program for the annual Summer outing of the Piedmont Section of the American Association of Textile Chemists & Colorists has been released by W. E. Rixon of Carbide & Carbon Chemical Co., Charlotte, N. C., sectional committee chairman and outing chairman. The outing will be held Friday and Saturday, June 11-12, at Blowing Rock, N. C., with headquarters at Mayview Manor. The tentative program follows:

Friday—2:30-8:30 p. m., registration; 6-8:30 p. m., dinner; 8:30 p. m., bingo; 9:30-12:30, square dancing with callers and demonstrators.

Saturday—9 a. m., men's golf tournament, directed by Sandy Young, Joseph Bancroft & Sons Co., Greensboro, golf committee chairman; 10 a. m., tour for women, arrangements incomplete; 12:30 p. m., luncheon for women; 2:30-6:30 p. m., women's bridge tournament and women's golf tournament; 6:30 p. m., social hour; 7:30-8:45 p. m., banquet, no speaker; 9 p. m.-1 a. m., formal dance. Door prizes, golf and bridge prizes and other scheduled events prizes will be awarded at intermission.

Du Pont And The Public Health

The story of how one American company fulfills its responsibility toward the public health is told by Du Pont in a 32-page booklet high-lighting a program of industrial medicine going far beyond periodic employee medical examinations and even its protection of people in the manufacture, use, and transportation of chemical products. Du Pont medical research, the company reported, is increasingly concerned with investigations of such diverse and challenging areas as fatigue, heart disease, clothing comfort, and new therapies and techniques for meeting people's physical and psychological needs. Basing its activities on the proposition that injury and illness must be stopped before they start, Du Pont said its company-wide staff of 166 doctors, 274 nurses, and 102 scientists and technicians operating in

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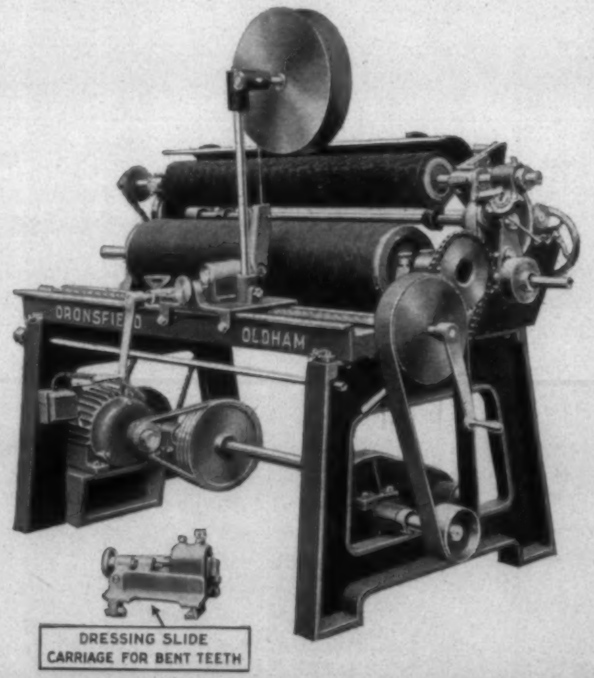

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this field has as its ultimate goal a safer, healthier U. S. industrial society. The booklet focuses on the starting point for much of the program, the Haskell Laboratory for Toxicology and Industrial Medicine, oldest of its kind in the U. S. It recently was provided with a new building and facilities near Newark, Del., which were formally dedicated March 29. As the booklet makes clear, the laboratory's public obligations do not end with determining whether new chemicals may be safely introduced commercially or old ones safely put to new uses. While these studies are among its primary responsibilities, its 23-member technical staff teams up with the company's medical division and physicians and engineers at its 73 plants to find answers to problems of safety and health in the design and operation of plants and equipment, the manufacture of chemical containers, and other phases of company activity, as well as broader questions of disease prevention and individual comfort. The booklet cites toxicological studies made of nylon as an example of exhaustive tests each new product must pass before it is marketed. Although the first wholly man-made fiber proved harmless on the basis of experiments with animals, small pieces of nylon were taped to the arms and legs of 200 paid volunteers to see if skin irritation would result. Another 5,000 persons tested nylon in actual wear before it was sold. Dyes and sizings were examined with equal thoroughness, because early textile finishing materials have been found to cause dermatitis.

Auburn Textile School Growing Rapidly

There has been a three-fold increase in enrollment and increased interest in the School of Textile Technology at Alabama Polytechnic Institute since Cleveland L. Adams took over its guidance less than two years ago. The remarkable strides made by the school in so short a period are attributed to a sharply-growing interest in textile careers in this expanding field in Alabama and other states, coupled with Mr. Adams' own zeal and his determination to develop at Auburn one of the finest institutions of its kind in the country.

Cleveland Adams

In the Fall of 1952, enrollment in the school was 47, 25 of which were former students. This year the enrollment has risen to 125, and advance registrations indicate about 145 will be enrolled in the Fall. This will be the largest number in the textile school's history, surpassing the former record of 126 in the 1937-38 scholastic year. In the last year and a half approximately $30,000 worth of equipment has been added, most of it representing gifts from mills and machinery manufacturers whose interest in the school has been stimulated by Dean Adams' progressive plans. Floor space for the school's use has been increased by the recent addition of that formerly used by the Auburn Alumni Association.

The school has been given major encouragement by the recent establishment of the Alabama Textile Education Foundation. This non-profit organization, chartered to aid textile education at Auburn and supported financially by Alabama textile mills, already has raised more than $17,600. As a result of these funds, the school's expansion is expected to be even more rapid in the future. They enabled this year the addition to the teaching staff of a carding and spinning instructor, H. D. Carpenter, formerly superintendent of the Imperial Cotton Mill, Eatonton, Ga. They are also making possible overhaul, repair and maintenance of machinery and the purchase of additional equipment.

The school's curriculum has been strengthened by the addition of new fundamental courses. Basic courses also have been added to the textile chemistry and dyeing curriculum, and a course has been instituted in textile management. Just inauguarated, too, is a two-year course, upon completion of which the student is awarded a certificate of proficiency.

Growth in the number of scholarships available is keeping pace with the school's physical progress. Twenty-seven students are currently enrolled on scholarships awarded by West Point (Ga.) Mfg. Co., and this company plans to present about that many additional ones in the Fall. The second largest scholarship program is conducted by Avondale Mills, which awards five $3,000 scholarships annually and will have 20 students in school after the fourth year of the plan's operation. Three students are attending on Lowenstein scholarships and one each on scholarships from Swift Mfg. Co. and Keever Starch Co. Several other concerns are considering awarding scholarships for next Fall's term, and a new program of this kind also is being currently developed by the Textile Education Foundation for submission to Alabama mills. Though most students are from Alabama, seven states, Nicaraugua and Pakistan are represented, and inquiries are being received from an increasing number of foreign students.

Every graduate of the school since Mr. Adams was named head has received several offers of jobs at good starting pay. "We here at the School of Textile Technology are confident that career opportunities in the field of textiles in the South will continue to increase in the years ahead," Mr. Adams said. "Already the demand for trained young men and women in the industry far exceeds the available supply. In fact, despite the recession of recent months, new developments would seem to indicate that this industry is on the verge of a renaissance and that job opportunities within it will match those in virtually any other good field and will exceed those in many fields."

Chemical Solution To Tar Spot Problem

Notable progress has been reported in the textile industry's battle against a problem of increasing seriousness—tar and asphaltic contamination of finished cotton fabrics, responsible for all losses reckoned in millions of dollars annually. Through proper use of a mixture of relatively simple chemicals during the finishing process, at least 95 per cent of tar spots have been removed from print cloth and fabrics of similar weight construction, according to the Institute of Textile Technology, Charlottesville, Va.

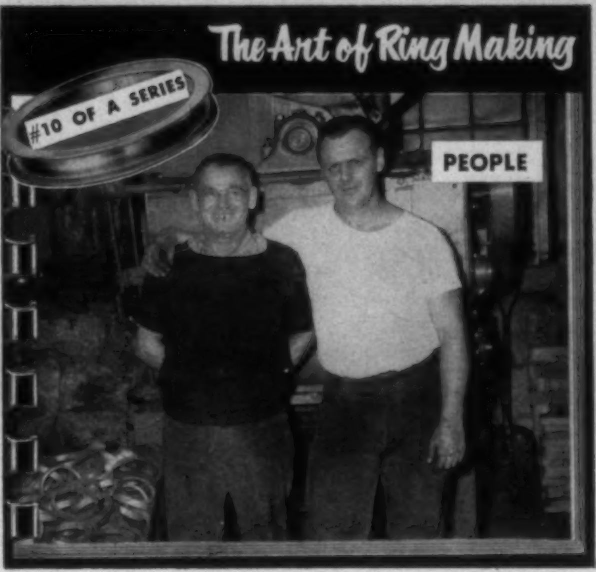
This announcement was made during the course of a recent conference on removal of tar spots from cotton goods in finishing, held by representatives of institute member mills, finishers and members of the I.T.T. research staff. Dr. Jack Compton, technical director, said that whereas tar and asphalt contamination has plagued the industry for a long time, the problem has grown much more serious in recent years with the introduction of new types of finishes such as embossing, polishing, glazing and the like. Owing to these new finishing techniques, minute tar and asphalt particles that might escape detection in most cotton fabrics are transformed into large black spots or long streaks in finished goods when subjected to the pressure of hot calendar rolls. As a result many yards of valuable fabric are classified as seconds, with consequent heavy financial loss. Lengthy research and commercial trials under I.T.T. auspices have led, Dr. Compton reported, to an effective, continuous-process means of removing nearly all such spots. He said its secret lies in the proper use of pine oil and kerosene in a quench box containing caustic. Similarly, he said, the use of other simple chemicals followed by hot water washes can effectively achieve close to 95 per cent removal efficiency in the kier or batch procedure.

Dr. Compton cited Leo R. Hubbard of the institute staff for his outstanding work in prosecuting research in this field. Discussing costs involved, Mr. Hubbard estimated chemicals used in the continuous process at 0.427 mills per yard for 80-square print cloth. He added, however, that preliminary findings now suggest the possibility of combining tar removal and de-sizing into a single operation, with resultant savings that could bring the cost down to about 0.1 mill per yard. "It was found that the finished fabrics from the quench-box runs had been as effectively de-sized as fabric which had been treated with an enzyme de-size," Mr. Hubbard explained. "By eliminating the enzyme de-size process, the total cost could be lowered appreciably." Full possibilities inherent in the use of the I.T.T. process to accomplish both tar spot removal and de-sizing simultaneously are the next areas to be explored by researchers, Mr. Hubbard said.

Dr. L. H. Hance, president of the institute, said several firms have run large-scale commercial tests of the various tar spot removal processes, including Rock Hill Printing and Finishing Co., North Carolina Finishing Co., Fulton Bag and Cotton Mills, Sayles-Biltmore Bleachery, Arnold Print Works and Crompton-Shenandoah Co. He also credited the assistant of T. C. Drew of Spartan Mills, who served as advisor from the institute's technical advisory committee during the course of the several research projects. Other finishing problems on which the institute has conducted research projects were discussed by T. L. W. Bailey Jr., and H. A. Mereness of the I.T.T. staff. W. H. Martin and Ben H. Word described recent stages of the institute's cyanoethylation development, whereby cotton fiber is chemically modified to produce a new type of textile fiber.

Deering Milliken Patents Loom Filling Grate

A U. S. patent for a new self-cleaning filling grate for looms has been issued to Deering Milliken Research Trust, Pendleton, S. C. The patent, No. 2,672,895, cover a filling grate have a special surface finish and adapted for looms having the side filling fork. According to the patent, which contains five allowed claims, the grate surface is composed of polytetrafluoroethylene or polytrifluorochloroethylene, and it has been found that lint, size particles, grease, dirt and moisture cannot adhere to this surface. The new grates have been given extensive testing in several Deering Milliken mills and, according to the company, have in all cases markedly reduced cleaning costs. Direct labor costs to brush conventional side filling grates have been reported as high as $25 per loom year, depending upon construction, yarn count, size content, humidity and other factors. Using the new grates, the mills have found it possible to cut clean-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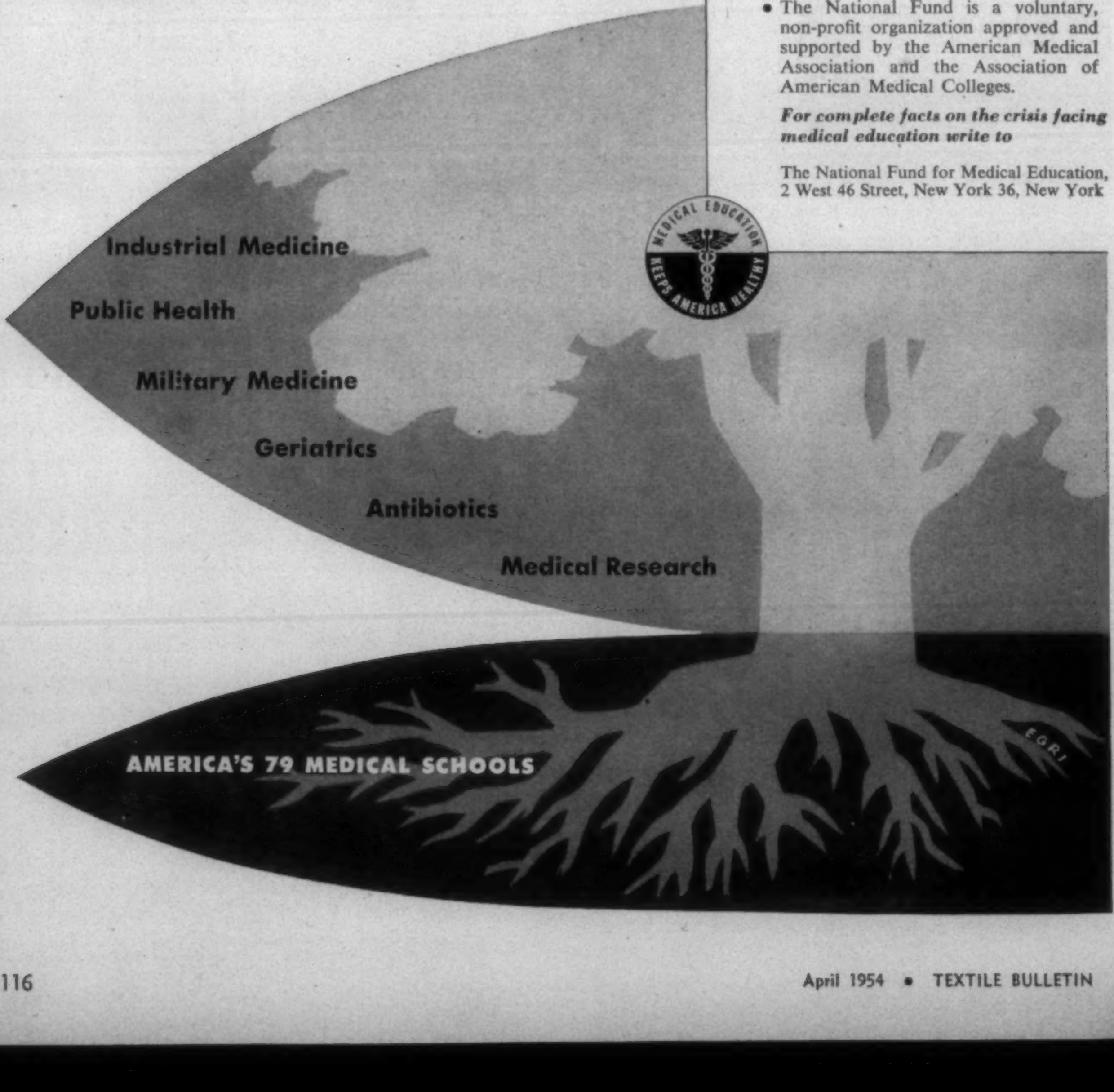

ing schedules down to one-third or less of their previous rate, and in many cases the routine blowing off of the loom with an air hose is sufficient to keep the grates lint-free. The resulting large savings in direct labor costs are calculated to return the cost of the grates several times in the course of a year, and these savings do not include further savings from increased loom efficiency and from improved quality. Higher loom efficiences are realized due to reduced down time for brushing, and better quality is obtained through eliminating the lint frequently brushed from the grates onto the cloth in conventional practice, as well as the thin places which occur when the grates get clogged before the cleaner gets to them. Deering Milliken Research Trust will have the new grates on display at Atlantic City. Although the company booth has been reserved for the primary purpose of exhibiting the 25-pound 2-for-1 ply twister-winder machine which the Research Trust has developed, as reported earlier, special arrangements have been made to have a limited number of the patented filling grates available there for purchase at a nominal sum by anyone interested in making a preliminary mill test. D. M. points out that since the grates are not being offered for sale generally nor has a manufacturer even been selected for licensing as yet, no more than five grates can be sold to any one person at the show.

Carolinas-Virginia Purchasing Agents Meet

The Carolinas-Virginia Purchasing Agents Association held its Spring meeting at the Poinsett Hotel in Greenville, S. C., recently. Jack T. Holt, purchasing agent of Erwin Mills, Durham, N. C., presided over the two-day meeting. L. O. Kimberly Jr., traffic manager from Atlanta, representing the American Cotton Manufacturers Association, the North Carolina Textile Manufacturers Association and the South Carolina Textile Manufacturers Association, spoke on "Transportation Can Carry Profit or Loss." Speakers on an open forum included Ben G. Merritt, Kerr Bleaching & Finishing Works Inc., Concord, N. C., representing mill supplies; and Fletcher Jordan Jr., Union Bleachery, Greenville, S. C., representing textiles.

Southern Shippers Hit Freight Increases

The Southern Traffic League, at its Spring meeting in Augusta, Ga., recently voted to vigorously oppose the growing practice of motor carriers in upping their charges for small shipments. Some of these practices were pointed out to the meeting by L. O. Kimberly Jr., traffic manager of both the North Carolina and South Carolina Textile Manufacturers Associations. Mr. Kimberly is also chairman of the league's small shipments and pick-up and delivery committee. Roy Harrell, traffic manager of West Point Mfg. Co., West Point, Ga., called attention to elimination of storage charges levied against cotton from other producing territories by railroads at Birmingham, Ala. Mr. Harrell proposed that these charges be eliminated and that the Southeast be put on the same basis. He pointed out to the group that although the cotton shippers pay the storage charges on these shipments the charges are added into the price of the cotton and indirectly paid by textile mills.

The league also moved to oppose the substitute automatic rate increase bill and to continue working for legislation that will restore size and weight limitations on parcel post. The league will also oppose a motor carrier tariff

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that would add an additional charge of 23 cents per 100 pounds on class rated shipments between Florida and other Southern points.

Mr. Harrell pointed out to the group that on cotton originating in the Southeast there is free transit on bills not over 20 months old. On cotton originating outside the Southeast, the transit charge is five cents per 100 pounds plus 15 per cent penalty on cotton moving into the Southeast.

The league authorized its president, B. H. Overton, St. Petersburg, Fla., to name committees to take up with the governors of the Southeastern states the Kentucky low gross load limit for trucks (42,000 pounds gross). The committees will urge Southeastern governors to oppose this load limit at the next governors conference where it is scheduled for discussion.

Ashcroft Receives Smith Memorial Award

A. Griffin Ashcroft, vice-president of research and development, Alexander Smith Inc., was presented the 1954 Harold DeWitt Smith Memorial Award at the recent Spring meeting of the American Society for Testing Materials at New York City. This was the fifth presentation of the medal, a testimonial to the memory of the late Harold DeWitt Smith endowed by Fabric Research Laboratories, Boston. It is awarded annually for outstanding achievement in fiber science and utilization.

Other highlights of the three-day meeting included reports from subcommittee task groups on fibers, yarn, fabric, chemical methods and performance tests. Helmut Wakeham of Textile Research Institute, Princeton, reported his fiber group is near completion of a test method using the Vibrascope for measurement of fibers. The yarn group, under Hugh Brown of Clemson College Textile School, reported that procedures for the various instruments to gauge the linear unevenness of yarns were being compiled prior to a study of co-ordination of the various devices. On twist determination, it was reported that a new method is being studied on cotton yarns which might prove applicable to other types as well.

A tentative method for determining wrinkle recovery is about ready, it was reported by Lyman Fourt, Harris Research Laboratories, Washington, D. C. Chemical methods of analyzing fabrics containing Vicara and Acrilan in mixtures were presented with results from the use of the various chemical solvents.

Piedmont A.A.T.C.C. Holds Meeting

The Piedmont Section of the American Association of Textile Chemists & Colorists held its Spring meeting at Roanoke, Va., April 10. Featured speaker at the meeting was Dr. Victor S. Salvin, of the Summit, N. J., research laboratories of the Celanese Corp. of America. Dr. Salvin, in a paper entitled "Recent Developments in the Dyeing and Finishing of Acetate and Acetate-Rayon Blended Fabrics," outlined a number of improvements in dyeing methods that will increase the washability of acetate and rayon fabrics many times. He pointed out that tests with the new dye fixations in the pilot plant and mill runs have shown that garments washed 50 times at 130° F. had a minimum of shade change. It was the first time the principles underlying fixation of acetate dyes by formaldehyde resins and copper fixatives have been presented to the industry, according to Dr. Salvin. "The present methods of dyeing use acetate dyes of poor wash fastness," he said. "We do not claim to have mastered the situation, but we have indicated an area of future work for the dyestuff manufacturers as well as for textile auxiliary people to seek further improvement." Dr. Salvin said others who worked on the process were A. B. Conciatori, R. A. Walker, G. C. Ward and Fred Fortess, all of the Celanese Corp's. Summit plant.

In other business at the meeting, George H. Lourigan of Kenosha, Wis., a student at North Carolina State College, won the student contest with a paper on "Factors Affecting the Fluorescence of Cotton." Judges for the contest were Neal Truslow, U. S. Rubber Co., Winnsboro, S. C.; Russell Lawrence, Rohm & Haas Co., Charlotte, N. C.; W. B. Huntley, General Dyestuff Co., Charlotte; and A. R. Thompson, Ciba Co. Inc., Charlotte.

The section, as noted, has its next meeting at Blowing Rock, N. C., June 11 and 12.

Pilot Plant For Cotton Cyanoethylation

The American Cyanamid Co. pilot plant for the cyanoethylation of cotton at Standard-Coosa-Thatcher Co., Rossville, Ga., should be completed and operating by the middle of May, according to a recent announcement by Dr. Jack Compton, technical director for the Institute of Textile Technology, Charlottesville, Va. Cyanoethylated cotton is produced by a treatment of cotton fiber, yarn or fabric with acrylonitrile. It is claimed the process produces cotton which is stronger, more resistant to mildew, and more receptive to dyes than is ordinary cotton. The process was developed at the institute under the direction of Dr. Compton.

Dr. Compton also reports that the construction of a second plant is under consideration. This plant would be built by the Monsanto Chemical Co. at an undecided location. Sites under consideration are Texas City, Tex., where the pilot plant would be operated by Monsanto, and at the Fulton Bag & Cotton Co., Atlanta, Ga.

Ban-Lon Trade Mark Licensed

Joseph Bancroft & Sons Co., Wilmington, Del., recently announced that the trademark, Ban-Lon, has been given to the unique yarn produced by an exclusive crimping process which the company controls. The company has licensed 15 companies to use the process, according to reports, 14 in this country and one in Canada.

Officials of the company pointed out that Ban-Lon yarn is now being produced in limited quantities but the establishment of firm production standards within the past few weeks means that several firms which have purchased the special crimping machines will be in full production by the middle of April.

The process is described as a unique one, which, through controlled heat and pressure in a high-speed containing device, gives a permanent crimp to fibers, with a resulting advantageous bulk. Intensive research indicates that the crimping process can be applied to a wide variety of textile fibers, both natural and synthetic.

The company also pointed out that none of the licensees will be assigned the right to use the trademark of Ban-Lon except on products which have been individually approved by Bancroft. Marketing activities for the yarn will be handled by the Everglaze Marketing Division, with field offices in New York, Los Angeles, London, Paris and other principal cities.

Charles T. Main Laboratory Dedicated

The Charles T. Main Textile Research Laboratory of the textile division, department of mechanical engineering, was dedicated at the Massachusetts Institute of Technology, Cambridge, recently. A memorial to the outstanding textile engineer who had been an M.I.T. alumnus, instructor, and corporation member, the laboratory will continue to pioneer in textile research and postgraduate research education. Its program centers about the evaluation and understanding of fiber, yarn and fabric properties and end-use behavior, with primary emphasis on the applied mechanics and microscopy of textile structures and on quality control.

At the dedication ceremonies Prof. Edward R. Schwarz, head of the textile division, reviewed briefly the history of textile research at the institute since 1872. Speaking on behalf of Charles T. Main Inc., an engineering firm established in 1893 by the late Mr. Main, was his grandson, Charles T. Main II. Col. Frank M. Gunby, a longtime associate of the company, then reviewed the life and work of the late Mr. Main. A graduate of M.I.T. in 1876, Charles T. Main was later associated with the institute as term and life member of the corporation and its executive committee and as president of the alumni association.

He served as consulting engineer on industrial, civic and military projects, and was honored by medals from the American Society of Mechanical Engineers and the National Association of Cotton Manufacturers for his pioneering work as the country's foremost textile engineer. The Boston Society of Civil Engineers, which awarded him the Desmond FitzGerald Medal in 1913, elected Mr. Main an honorary member in 1932; and Northwestern University awarded him the honorary degree of doctor of engineering in 1935. A president of the American Society of Mechanical Engineers, the American Institute of Consulting Engineers, and the Engineers Club of Boston, Mr. Main also held membership in the Newcomen Society, Society for the Promotion of Engineering Education, American Association for Advancement of Science, American Academy of Arts and Sciences, and the Textile Research Institute.

End-Use Standards For Man-Made Fibers

A seven-man committee of mill men and converters recently submitted recommendations for the setting up of a code of end-use standards for man-made fibers in a program to increase the consumption of man-made fabrics. The plan, "A Plan for the Increased Sale and Consumption of Fabrics of Man-Made Fibers," was drawn up by a committee headed by Jackson E. Spears, vice-president of Burlington Mills Corp., and a director of the National Federation of Textiles and the Textile Distributors Institute.

The plan, which points out the need for pre-testing to predict performance of fabrics, calls for end-use standards for all man-made fibers similar to the code set up for rayon and acetate under the procedure of the American Standards Association.

Converters and mills would have to do an about face if they accept the plan since both of these groups as well as

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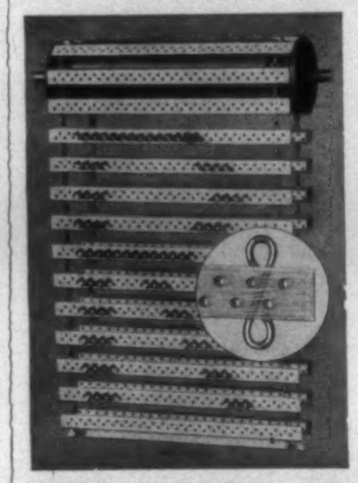

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Ashcroft Receives Smith Memorial Award

A. Griffin Ashcroft, vice-president of research and development, Alexander Smith Inc., was presented the 1954 Harold DeWitt Smith Memorial Award at the recent Spring meeting of the American Society for Testing Materials at New York City. This was the fifth presentation of the medal, a testimonial to the memory of the late Harold DeWitt Smith endowed by Fabric Research Laboratories, Boston. It is awarded annually for outstanding achievement in fiber science and utilization.

Other highlights of the three-day meeting included reports from subcommittee task groups on fibers, yarn, fabric, chemical methods and performance tests. Helmut Wakeham of Textile Research Institute, Princeton, reported his fiber group is near completion of a test method using the Vibrascope for measurement of fibers. The yarn group, under Hugh Brown of Clemson College Textile School, reported that procedures for the various instruments to gauge the linear unevenness of yarns were being compiled prior to a study of co-ordination of the various devices. On twist determination, it was reported that a new method is being studied on cotton yarns which might prove applicable to other types as well.

A tentative method for determining wrinkle recovery is about ready, it was reported by Lyman Fourt, Harris Research Laboratories, Washington, D. C. Chemical methods of analyzing fabrics containing Vicara and Acrilan in mixtures were presented with results from the use of the various chemical solvents.

Piedmont A.A.T.C.C. Holds Meeting

The Piedmont Section of the American Association of Textile Chemists & Colorists held its Spring meeting at Roanoke, Va., April 10. Featured speaker at the meeting was Dr. Victor S. Salvin, of the Summit, N. J., research laboratories of the Celanese Corp. of America. Dr. Salvin, in a paper entitled "Recent Developments in the Dyeing and Finishing of Acetate and Acetate-Rayon Blended Fabrics," outlined a number of improvements in dyeing methods that will increase the washability of acetate and rayon fabrics many times. He pointed out that tests with the new dye fixations in the pilot plant and mill runs have shown that garments washed 50 times at 130° F. had a minimum of shade change. It was the first time the principles underlying fixation of acetate dyes by formaldehyde resins and copper fixatives have been presented to the industry, according to Dr. Salvin. "The present methods of dyeing use acetate dyes of poor wash fastness," he said. "We do not claim to have mastered the situation, but we have indicated an area of future work for the dyestuff manufacturers as well as for textile auxiliary people to seek further improvement." Dr. Salvin said others who worked on the process were A. B. Conciatori, R. A. Walker, G. C. Ward and Fred Fortess, all of the Celanese Corp's. Summit plant.

In other business at the meeting, George H. Lourigan of Kenosha, Wis., a student at North Carolina State College, won the student contest with a paper on "Factors Affecting the Fluorescence of Cotton." Judges for the contest were Neal Truslow, U. S. Rubber Co., Winnsboro, S. C.; Russell Lawrence, Rohm & Haas Co., Charlotte, N. C.; W. B. Huntley, General Dyestuff Co., Charlotte; and A. R. Thompson, Ciba Co. Inc., Charlotte.

The section, as noted, has its next meeting at Blowing Rock, N. C., June 11 and 12.

Pilot Plant For Cotton Cyanoethylation

The American Cyanamid Co. pilot plant for the cyanoethylation of cotton at Standard-Coosa-Thatcher Co., Rossville, Ga., should be completed and operating by the middle of May, according to a recent announcement by Dr. Jack Compton, technical director for the Institute of Textile Technology, Charlottesville, Va. Cyanoethylated cotton is produced by a treatment of cotton fiber, yarn or fabric with acrylonitrile. It is claimed the process produces cotton which is stronger, more resistant to mildew, and more receptive to dyes than is ordinary cotton. The process was developed at the institute under the direction of Dr. Compton.

Dr. Compton also reports that the construction of a second plant is under consideration. This plant would be built by the Monsanto Chemical Co. at an undecided location. Sites under consideration are Texas City, Tex., where the pilot plant would be operated by Monsanto, and at the Fulton Bag & Cotton Co., Atlanta, Ga.

Ban-Lon Trade Mark Licensed

Joseph Bancroft & Sons Co., Wilmington, Del., recently announced that the trademark, Ban-Lon, has been given to the unique yarn produced by an exclusive crimping process which the company controls. The company has licensed 15 companies to use the process, according to reports, 14 in this country and one in Canada.

Officials of the company pointed out that Ban-Lon yarn is now being produced in limited quantities but the establishment of firm production standards within the past few weeks means that several firms which have purchased the special crimping machines will be in full production by the middle of April.

The process is described as a unique one, which, through controlled heat and pressure in a high-speed containing device, gives a permanent crimp to fibers, with a resulting advantageous bulk. Intensive research indicates that the crimping process can be applied to a wide variety of textile fibers, both natural and synthetic.

The company also pointed out that none of the licensees will be assigned the right to use the trademark of Ban-Lon except on products which have been individually approved by Bancroft. Marketing activities for the yarn will be handled by the Everglaze Marketing Division, with field offices in New York, Los Angeles, London, Paris and other principal cities.

Charles T. Main Laboratory Dedicated

The Charles T. Main Textile Research Laboratory of the textile division, department of mechanical engineering, was dedicated at the Massachusetts Institute of Technology, Cambridge, recently. A memorial to the outstanding textile engineer who had been an M.I.T. alumnus, instructor, and corporation member, the laboratory will continue to pioneer in textile research and postgraduate research education. Its program centers about the evaluation and understanding of fiber, yarn and fabric properties and end-use behavior, with primary emphasis on the applied mechanics and microscopy of textile structures and on quality control.

At the dedication ceremonies Prof. Edward R. Schwarz, head of the textile division, reviewed briefly the history of textile research at the institute since 1872. Speaking on behalf of Charles T. Main Inc., an engineering firm established in 1893 by the late Mr. Main, was his grandson, Charles T. Main II. Col. Frank M. Gunby, a long-time associate of the company, then reviewed the life and work of the late Mr. Main. A graduate of M.I.T. in 1876, Charles T. Main was later associated with the institute as term and life member of the corporation and its executive committee and as president of the alumni association.

He served as consulting engineer on industrial, civic and military projects, and was honored by medals from the American Society of Mechanical Engineers and the National Association of Cotton Manufacturers for his pioneering work as the country's foremost textile engineer. The Boston Society of Civil Engineers, which awarded him the Desmond FitzGerald Medal in 1913, elected Mr. Main an honorary member in 1932; and Northwestern University awarded him the honorary degree of doctor of engineering in 1935. A president of the American Society of Mechanical Engineers, the American Institute of Consulting Engineers, and the Engineers Club of Boston, Mr. Main also held membership in the Newcomen Society, Society for the Promotion of Engineering Education, American Association for Advancement of Science, American Academy of Arts and Sciences, and the Textile Research Institute.

End-Use Standards For Man-Made Fibers

A seven-man committee of mill men and converters recently submitted recommendations for the setting up of a code of end-use standards for man-made fibers in a program to increase the consumption of man-made fabrics. The plan, "A Plan for the Increased Sale and Consumption of Fabrics of Man-Made Fibers," was drawn up by a committee headed by Jackson E. Spears, vice-president of Burlington Mills Corp., and a director of the National Federation of Textiles and the Textile Distributors Institute.

The plan, which points out the need for pre-testing to predict performance of fabrics, calls for end-use standards for all man-made fibers similar to the code set up for rayon and acetate under the procedure of the American Standards Association.

Converters and mills would have to do an about face if they accept the plan since both of these groups as well as

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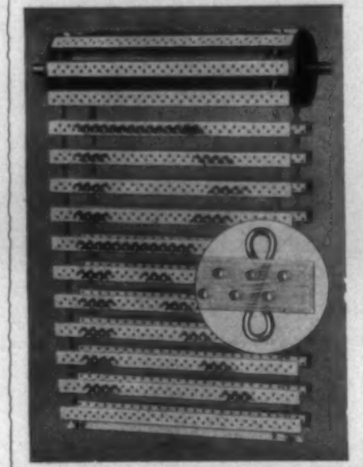

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the fiber producers withdrew from active participation in the committee which set up the standards for the rayon and acetate fibers. It has been the general view of the industry that use of standards was up to the retailers. The producers, not represented on the committee, have been extended an invitation to appoint members.

The establishing of such standards is not a new idea, nor is it definite that all segments of the man-made fiber industry will support it. Nevertheless, it cannot be denied that such a plan has its merit. A disappointed consumer seldom bites twice into a sour apple and many consumers have been disappointed in some of their purchases of man-made fabrics. Not because of false advertising necessarily, but because of false hopes on the part of the consumer. This is easy to understand when one considers the number of man-made fabrics on the market and the consumer's false belief that each is capable of doing everything that is claimed for one. It boils down to the fact that the consumer must be educated in the merits of the individual fabrics and must be brought to understand that each fabric has its own characteristics. It should be hammered home that each succeeding "miracle" fabric of man-made fiber construction is not an improved version of its predecessor and that it does not embrace all the qualities ever introduced in man-made fibers.

Pre-testing of fabrics and identification of exactly what they will do for the consumer removes the responsibility from the consumer of boning up on man-made fabrics and becoming an amateur expert on the performance of each.

Other members of the committee that drew up the recommendations for a code were William N. Chace, vice-president of Greenwood Mills Inc. and president of the National Federation of Textiles; Walter Ross, president of Rosewood Fabrics Inc. and head of Textile Distributors Institute; Andrew J. Sokol, vice-president of J. P. Stevens & Co. and a vice-president and director of N.F.T.; Lyman Frieze, president of Duplan Corp.; George Greenspan of Cantor-Greenspan & Co.; and Charles Carvin of Charles Carvin & Co., directors of T.D.I.

Purchasers Assert Business Dip Over

The National Association of Purchasing Agents has reported that a March survey of purchasing executives from coast to coast and in all lines of business indicates that the industrial business decline has abated and is leveling off. Reports from 225 of the association's members show that for the first time since last May increases outnumber decreases for both industrial production and new orders. The association points out that, as expected, the individual changes are not large and the reversal of the trend is not strong enough to indicate a sharp upswing. The 225 covered in the monthly survey are chosen to represent both a cross section of business and industry and also all geographical areas.

Shortly before the War Between the States, Sultan Abdul Medjid of Turkey authorized the export of two male and 18 female Angora goats to the U. S. Angora goats are the source of mohair, of course, and Turkey's policy had been to prohibit the shipment of goats to protect the Turkish mohair market. Today there are 2,500,000 Angora goats in the U. S., which Turkish sources say are all decended from the original 20. And American mohair output is now the largest in the world. Turkey is second.

Annual Meeting, S. C. Textile Manufacturers

The South Carolina Textile Manufacturers Association will hold its annual convention at Sea Island, Ga., May 27-29. The convention, details for which have not been completed, will be held at the Cloister Hotel. John K. Cauthen, executive vice-president of S.C.T.M.A., has said that the board meeting will be held on Thursday, May 27, and elections will probably follow on Saturday morning. Speakers already scheduled for the convention include Robert C. Jackson of the American Cotton Manufacturers Institute; Dr. Pierce Harris, Atlanta; and Frank W. Lovejoy, Socony-Vacuum Co., New York.

President of the South Carolina association is Marshall C. Stone, Pacolet Mfg. Co., Pacolet. By custom and precedent, the vice-president, Ellison S. McKissick of Alice Mfg. Co., Easley, will move up to president and a new vice-president will be elected.

Mr. Cauthen also announced that the cotton buyers' division of the S.C.T.M.A. will meet at the Ocean Forest Hotel, Myrtle Beach, S. C., on Friday and Saturday, May 7 and 8. A feature of the two-day session will be a discussion of the U. S. Department of Agriculture bulletin, "An Appraisal of Certain Central Cotton Markets with Respect to Suitability for Designation for Price Quotations." E. J. Overby and Rodney Whitaker of the U.S.D.A.'s agricultural marketing service in Washington will be present for this discussion. John C. Bell of Inman Mills is chairman of the cotton buyers division.

Bureau Reports On Fiber Consumption

United States producers of rayon and acetate filament yarn and staple shipped in March a total of 90,800,000 pounds, according to the *Textile Organon*, statistical bulletin of the Textile Economics Bureau Inc. This was a gain of 12½ per cent over February and was the largest total since October 1953, but 13½ per cent under shipments in March 1953. In the first three months of 1954, shipments have totaled 253,100,000 pounds, 15 per cent less than the 298,000,000 pounds shipped in the corresponding 1953 period.

Production of rayon and acetate in March was 87,700,000 pounds, 15½ per cent over February and also the highest total since October 1953. In March 1953, production was 103,600,000 pounds. Stock held by producers at the end of March amounted to 103,700,000 pounds, three per cent less than at the end of the previous month. A year ago, stock was 78,300,000 pounds. For the third consecutive month, shipments of rayon regular-tenacity yarn rose, but at 14,400,000 pounds, they were still well below the March total of 19,600,000 pounds. Stock of rayon regular-tenacity yarn was 35,400,000 pounds at the end of March compared with 31,300,000 pounds a year ago. March acetate yarn shipments jumped to 15,100,000 pounds, the highest since November. In March 1953 acetate yarn shipments were 19,700,000 pounds. Rayon high-tenacity yarn shipments in March were 32,100,000 pounds, an increase over the average of the four preceding months but still under the March 1953 total of 42,700,000 pounds.

A new record was set for shipments of rayon staple+tow in March. A total of 23,100,000 pounds were shipped and with production virtually identical producers' stock remained steady. Shipments of acetate staple+tow last month amounted to 6,100,000 pounds, a marked increase over recent months but still far below the March 1953 total of 9,400,000 pounds. Stock at the end of the month declined to 7,400,000 pounds. Imports of rayon staple (which may include some acetate) in the first two months of 1954 amounted to 2,143,000 pounds, a decline of 81½ per cent from the 11,621,000 pounds in the corresponding period of 1953. The sharp decline, the *Organon* points out, was accompanied by some notable shifts in the country of origin. Cuba was by far the largest supplier of staple to the U. S. and her share was over 37 per cent of the total. Other major sources so far in 1954 in the order of their importance were West Germany with 28 per cent; France and Norway 12 per cent each; and the United Kingdom three per cent. In the first two months of last year, Belgium was the leading supplier with a 30 per cent share and the other major sources were Norway with 12 per cent, Switzerland and the United Kingdom with ten per cent each, West Germany nine per cent, Cuba and the Netherlands eight per cent each, France seven per cent and Italy five per cent.

Non-cellulosic man-made staple imported in the first two months of 1954 amounted to 53,000 pounds compared with 154,000 pounds a year ago. Practically all of this staple was Perlon from West Germany.

Imports of rayon staple in 1953, according to the *Organon,* amounted to 68,117,000 pounds, a figure almost identical with the 68,190,000 pounds imported in the previous year. The total of non-cellulosic staple imported amounted to 594,000 pounds and this was made up almost entirely of Perlon from West Germany. In 1952, the non-cellulosic staple imports totaled 914,000 pounds. The *Organon* points out that the rayon import data may include nominal amounts of acetate staple. Belgium and West Germany were the largest suppliers of staple during 1953. Principal changes in sources of imports during the year were increases from Belgium, Cuba, France, West Germany and Switzerland. Compared with 1952 there were declines in imports from Italy, the Netherlands, Norway, Sweden, and the United Kingdom. Imports of man-made filament yarn last year totaled 768,000 pounds compared with 286,000 pounds in 1952 and 5,081,000 pounds in 1951. Switzerland was the source of about two-thirds of the filament yarn imports and most of the balance came from Canada, the Netherlands and Italy. The great bulk of filament yarn brought into the country, according to the *Organon*, is believed to be viscose rayon.

The U. S., exporting 10,000,000 pounds of man-made filament yarn in 1952, proved itself a net exporter of such yarn by some 9,200,000 pounds. On the other hand, it was a net importer of man-made staple in the amount of 61,900,000 pounds. On total balance of both types of man-made fibers, the U. S. was a net importer by 52,700,000 pounds which compares with 55,000,000 in 1952 and 70,300,000 pounds in 1951.

An analysis by the *Organon* of cellulose consumption by the U. S. rayon and acetate producing industry, reveals that last year 589,100 short tons were used. This figure was seven per cent over consumption in 1952 but four per cent under the 1951 record high of 616,300 tons. Last year 89 per cent of the total cellulose consumed by the rayon and acetate industry was wood pulp. This figure, amounting to 522,000 tons, represented a new high in tonnage and percentage of the total. Conversely, the 1953 consumption of linters pulp was only 67,100 tons or 11

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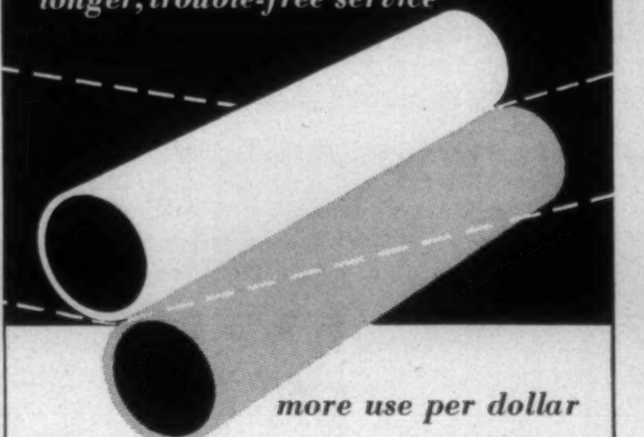

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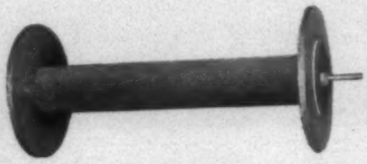

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per cent of the total, the smallest proportion now on record.

Production of viscose+cupra rayon last year consumed 481,000 tons of cellulose. Eighty-seven per cent was wood pulp and the balance linters. An average of 1.06 pounds of cellulose was consumed to produce one pound of viscose+cupra rayon yarn, staple and tow, including normal waste. This proportion of cellulose to finished yarn has prevailed for the past several years, according to the *Organon*.

Total textile fiber consumption in the U. S. during 1953, according to the *Organon* was 6,521,500,000 pounds. This consumption at the mill level of cotton, wool, and man-made fibers was two per cent over 1952 but 4½ per cent under 1951 and 1950. These two years were the best for total fiber consumption since the war-time year of 1943.

Last year cotton consumption amounted to 4,520,700,000 pounds, an increase of two per cent over 1952, but 6½ per cent under 1951. Mill consumption of apparel and carpet raw wool last year was 488,800,000 pounds which represented a partial recovery from the low 1952 level, but otherwise was the lowest year for wool use since 1940 when 407,900,000 pounds were consumed. Rayon+acetate consumption in 1953 totaled 1,223,000,000 pounds, a slight increase over 1952 but well below the 1950 and 1951 rates. In comparison, however, with any year prior to 1950, the 1953 rate of consumption is impressive, the *Organon* points out.

The year 1953 witnessed a continuation of the growth of the non-cellulosic fibers, but the increase was more modest both in pounds and percentage than it had been previously. Consumption last year aggregated 283,600,000 pounds of non-cellulosic fibers, ten per cent more than in 1952. The increase in 1952 over 1951, amounting to 53,400,000 pounds, was 26 per cent. Silk consumption last year dwindled to 5,400,000 pounds put the poundage involved was so small as to have little significance in the over-all fiber consumption picture.

Cotton accounted for 69.3 per cent of total fiber consumption, a figure equal to 1952 but notably below the 1951 figure of 71 per cent. Wool's share last year remained at the 7.5 per cent level shown in 1952 and, while slightly above the 7.2 per cent figure in 1951, it was still decidedly below those for any other post-war year and lower than for any year later than 1934. Silk remained steady at a nominal 0.1 per cent of total consumption. The rayon+acetate share during 1953 was 18.8 per cent. The *Organon* notes that starting in 1943 the rayon+acetate percentage rose each year through 1950. It fell in 1951, rose in 1952 and dropped off again in 1953. The non-cellulosic man-made fibers increased their share to 4.3 per cent of the total in 1953 but the rate of increase was lower than that of recent years in the past. The man-made fibers as a whole accounted for 23.1 per cent of total fiber consumption in 1953 compared with 23 per cent in 1952 and 21.7 per cent in 1951.

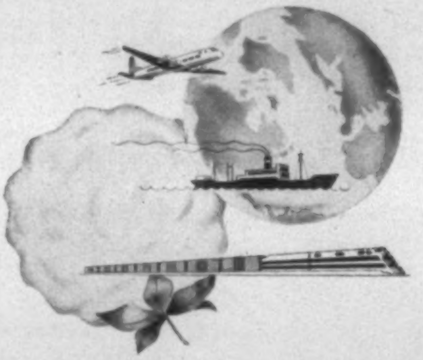
From the standpoint of "utility poundage" consumed, a different proportion for each category of fibers is obtained, the *Organon* points out. Utility poundage takes into account the processing losses incurred in the various fibers, the sheerness or fineness of the resulting fabric that clothes the consumer, and the wear life of the fabric in use. In the case of cotton, spinning and processing losses are currently estimated at nine per cent, in wool they are five per cent, for man-made staple four per cent and 1½ per cent for man-made filament yarn. In raw silk, the processing loss including both waste and boil-off is 23 per cent. These processing and spinning loss percentages represent revisions of earlier figures, the *Organon* notes. In both the sheerness and wear life factors of utility poundage, the *Organon* points out that the non-cellulosic man-made fibers are not needed in as great a poundage to produce comparable items as are cotton, wool or rayon and acetate. Because the main poundage of the non-cellulosic man-made fibers is nylon, there is good reason for doubling the actual poundage of these fibers to obtain their utility poundage. On the basis of utility poundage, therefore, the startling fact is revealed that the man-made fibers accounted for nearly 28 per cent of the total fiber consumed last year.

Spinners' Order Backlogs Reduced In March

Order backlogs of carded cotton sales yarn spinners were reduced slightly during March operations but their sold-ahead position at the end of the month still represented nearly eight weeks' production, the Textile Information Service reports. As of March 27, unfilled orders on spinners' books amounted to 7.81 weeks' production and were 3.45 times the stocks on hand. On Feb. 27, backlogs represented 7.95 weeks' output and were 3.75 times stock. At the end of March last year, unfilled orders amounted to 8.39 weeks' production and were 7.91 times stocks on hand. Total yarn in stock on March 27, including yarn made for future deliveries against unfilled orders, amounted to 2.26 weeks' production as compared with stocks on Feb. 27 equal to 2.13 weeks' output and inventories at the end of March 1953, equivalent to 1.06 weeks' production. According to statistics of the Carded Yarn Association covering reports from approximately 1.4 million member spindles, production in the week ended March 27 consisted of 32.2 per cent knitting yarn, 49.7 per cent weaving yarn, and 18.1 per cent all others. On Feb. 27, the percentages were 31.3, 50.4 and 18.3 respectively and at end-March last year they were 31.4, 50.4 and 18.2.

Sales And Production Figures On Wool

Sales of woven wool apparel fabrics in January by 75 firms increased 50 per cent in comparison with the average for the last four months of 1953 but were 41 per cent less than in January a year ago, the National Association of Wool Manufacturers reports. January production dropped 28 per cent from January 1953, and also was 21 per cent less than the September-December 1953, average. The 75 firms produce about 50 per cent of the woven wool apparel fabric made in the U. S. The figures were reported in the March issue of N.A.W.M.'s *Current Statistics of Wool Manufacture.* January shipments of Bradford worsted weaving yarn by 47 firms were one per cent above the November-December 1953, average but 50 per cent less than in January 1953. Bradford knitting yarn shipments in January were 12 per cent under the November-December average and down 43 per cent from the previous January. Shipments of French system weaving yarn in January were two per cent above the November-December average but 14 per cent off from January 1953. French knitting yarn shipments increased nine per cent in January from No-November-December 1953, average but 50 per cent less previous January. N.A.W.M. estimated shipments for all U. S. firms having French spindles.



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– TEXTILE INDUSTRY HAPPENINGS AS THIS ISSUE WENT TO PRESS –

PERSONAL NEWS

Lewis M. Heflin has been appointed executive vice-president of Cone Mills Inc., New York City. Mr. Heflin, who joined the Cone organization 20 years ago, was elected as a director and assistant secretary of the company in 1940 and as secretary in 1941. In 1949 he was elected vice-president and in 1950 he became a director of the parent organization. In his new post as executive vice-president, Mr. Heflin will continue his duties as secretary of the company. . . . The appointment of two vice-presidents was also announced by the company. Thomas R. C. Hood, who has been assistant vice-president working on manufacturing and chain store accounts since 1950, will continue his present duties as vice-president. Robert C. Shaw, who has been with the company for 25 years, has been an assistant vice-president in the work denim and covert department. He will continue in this capacity with his new appointment.

Warren A. Beman has been named assistant manager in the industrial division of Socony-Vacuum Oil Co. Inc., New York City. Mr. Beman, who has been with the company since 1942, was formerly chief engineer in the chemical products section.

John L. Hutcheson Jr., Peerless Woolen Mills, Rossville, Ga., has been named a nominee for the vice-presidency of the National Association of Wool Manufacturers. The election will be held May 6 at the 89th annual meeting of N.A.W.M. in New York City.

Alfred L. Butler Jr., president of Arista Mills Co., Winston-Salem, N. C., has been elected president of Carolinas United Red Feather Service for 1954. Elected to the executive committee of the board of directors was Hugh G. Chatham, executive vice-president of Chatham Mfg. Co., Elkin, N. C.

George M. Chappell, assistant general manager of Wyandotte Worsted Co., Pittsfield, Mass., has resigned his position to become assistant vice-president in charge of manufacturing of Chatham Mfg. Co., Elkin, N. C. Mr. Chappell joined Wyandotte in 1949 and was appointed assistant general manager in 1952.

Henry B. Miller has retired as manager of the Lynchburg (Va.) Division of Consolidated Textile Co., and is now serving as a mill consultant. Mr. Miller, who has more than 40 years' experience in textiles, joined Consolidated in 1929. From 1935 until 1943 he was manager successively of Pee Dee, Shannon and American Spinning mills. He rejoined Consolidated in 1943 at the Lynchburg Division.

Donald M. Goerg has joined the textile division of Celanese Corp. of America as fabric technician and designer in the fabric development department. A graduate of the University of Vienna, Austria, Mr. Goerg previously held technical and development posts with E. I. du Pont de Nemours & Co. Inc., Klopman Mills Inc., and Allied Chemical & Dye Corp.

A number of personnel changes have been announced by the Goodyear Clearwater Mills, Mill No. 2, Rockmart, Ga. C. H. Dyar has been transferred to Mill No. 3 at Atco, Ga., where he will serve as overseer of twisting. L. P. Hanson, for many years overseer of spinning, has been made twisting room overseer. Donald Edwards has been transferred from assistant superintendent on the third shift to the efficiency department, and Troy Weldon has been assigned third-shift superintendent after serving as second hand in the twisting department.

F. M. Arthur has joined the Fulton Bag & Cotton Mills, Atlanta, Ga., as cotton buyer. Mr. Arthur formerly was assistant cotton buyer for the Graniteville Co., Augusta, Ga.

Allan L. Burton has joined Veeder-Root Inc., to carry out market research and electronic development work with the company. Mr. Burton was formerly associated with the Radio Corp. of America, American Optical Co., and Tracerlab Inc. During World War II he was associated with the underwater sound laboratories, Harvard University, where he worked on the development of underwater weapons.

Hubert A. Des Marais has joined the industrial chemicals division of Geigy Chemical Corp., New York City, as manager of the division. Mr. Des Marais was general sales manager of Pennsylvania Salt Mfg. Co. of Washington before he came to Geigy and prior to that he was associated with the General Dyestuff Corp. on the West coast.

Four promotions in the industrial trades tape division of Minnesota Mining & Mfg. Co. have been announced recently. Fred L. Hayes has been appointed sales manager in the Atlanta, Ga., and High Point, N. C., area; Robert W. Draine has been promoted to sales manager in Dallas, Texas; William E. Woods has been promoted to New York sales supervisor; and Richards H. Burhoe has been promoted to sales supervisor in the Boston, Mass., area.

W. D. Knox has been named superintendent of Glendale Mills Inc., Douglasville, Ga. Mr. Knox was formerly overseer of weaving at the company's Glendale, S. C., plant.

Jacques Wolf & Co. has announced the names of its three new top officers, following the death of its founder, Jacques Wolf, recently. Schuyler E. Tylee has been elected president; Gerald J. Desmond, vice-president, treasurer and general manager; and Arnold Pfister, secretary and plant manager.

Walter P. Murray has been named sales manager of Mount Hope Machinery Co., Taunton, Mass. Mr. Murray joined the Mount Hope firm as a sales engineer in 1949 and was promoted to the post of executive engineer last year. He will work in close co-operation both with the company's domestic sales staff and its international sales organization.

Norman K. Anderson has been named sales manager of the Warner Electric Brake & Clutch Co., Beloit, Wis. Mr. Anderson, who has been with the company since 1946, was formerly manager of the firm's industrial division. Prior to coming with Warner, he was associated with the DeVilbiss Corp. and Fairbanks-Morse Co.

Clarence O. Smith has joined the sales staff of the Cecil H. Jarrett Co. Inc., Newton, N. C., manufacturer of industrial and automotive chemicals. Mr. Smith, a veteran of more than 25 years in textiles, has been assigned to North Carolina and Virginia sales territory. He was formerly associated with Atkinson, Haserick & Co., Burlington Mills, Marion Mfg. Co., Victor-Monaghan Co., and Opelika Mills.

OBITUARIES

Robert Burns, 47, director of technical and customer service for Latin-American affiliates of the Celanese Corp. of America, died recently in Caracas, Venezuela, while on a business trip. He is survived by his widow, a son and a brother.

W. F. Fancourt Jr.

Walter F. Fancourt Jr., 71, founder of the predecessor organization to W. F. Fancourt Co., died April 12 in Philadelphia. Mr. Fancourt was a member of the American Association of Textile Chemists & Colorists and was immediate past president of the Oil Trade Association of Philadelphia. Survivors include his widow, two sons, a daughter and two brothers. His sons are officers of the W. F. Fancourt Co.

Myron S. Freeman, former president and general manager of the Bell Co., died April 11 in his home at Worcester, Mass. Mr. Freeman was believed to have suffered a heart attack while trying to summon aid for his wife, Mrs. Marion Crawford Freeman, who had been fatally stricken earlier. Mr. Freeman retired in 1953 as president

BEFORE CLOSING DOWN

of the Bell Co., after 27 years with the firm. He was a member of the board of trustees of the Lowell Textile Institute and a director of the National Association of Wool Manufacturers. A sister survives.

MILL NEWS

DOUBLE SHOALS, N. C.—Double Shoals Mill Inc. has announced that it will close indefinitely as soon as current stock is processed. One of the oldest mills in Cleveland County, it is operated by Slater Bros., Paterson, N. J. The plant employs 75 persons.

CLIFTON HEIGHTS, PA.—Officials of the Kent Mfg. Co. here have issued a "no comment" reply to rumors that the company plans to move part or all of its operations South. Kent is currently negotiating with Local 178, Textile Workers Union of America, C.I.O., on a wage contract that expired April 1, and it has been rumored that the company might move at least some of the equipment of its worsted mill South. The company operate Edenfield Mills Inc., in Leesville, S. C.

SPARTANBURG, S. C.—Offices have been opened here for the sale of a majority of company houses at Beaumont Mills here. The houses will be sold to employees. The majority of houses at Spartan Mills will also be sold later, it was reported.

CHATTANOOGA, TENN. — Construction has begun on a building to house newly-formed Heirloom Carpet Mills Inc. here. The structure will be one story and will have 20,000 square feet of floor space. The new company was formed by George F. Collins and A. H. Bates, both of Chattanooga.

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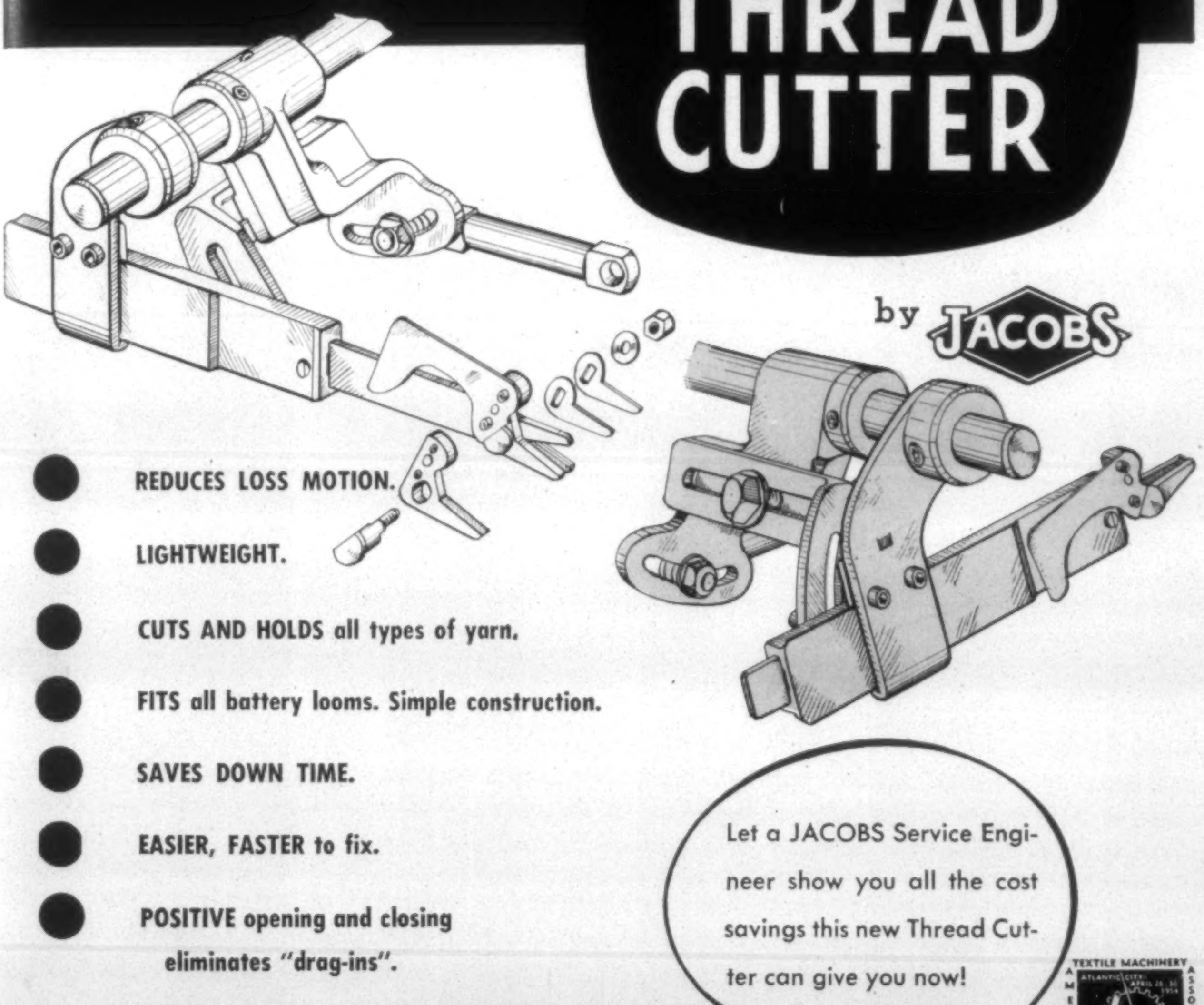

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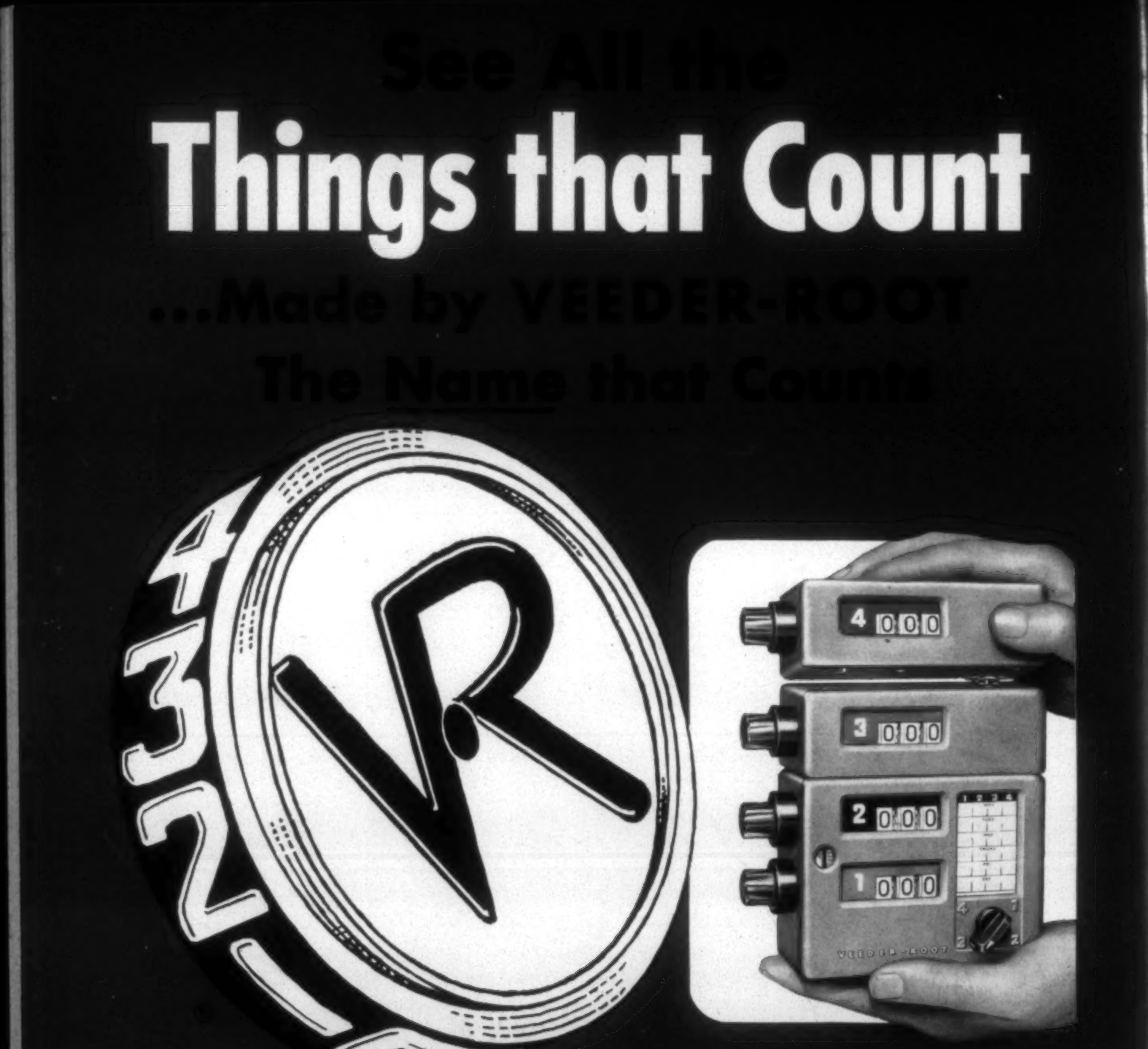

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